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HELMINTHOLOGICAL ABSTRACTS

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For the Year 1943.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY
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Vol. XII, Part 4.

126—Acta Brevia Sinensia.

- a. CHANG, K., 1943.—“Researches in parasitology in Free China. A brief review.” No. 4 [Typescript copy 6 pp.].

127—Acta Medica Scandinavica.

- a. BONSDORFF, B. VON, 1943.—“On the remission after removal of the worm in pernicious tapeworm anemia in presence and absence of extrinsic factor in the food. *Diphyllobothrium latum* and pernicious anemia VI.” 116 (1), 77-95.

(127a) Previous work by Bonsdorff [see Helm. Abs., Vol. VIII, Nos. 258a & b ; Vol. IX, Nos. 370a, b & c] having shown that the expulsion of *Diphyllobothrium latum* was followed by a rapid blood regeneration without any other anti-anaemic treatment, it was concluded that the patients possessed all the substances necessary to produce the anti-anaemic principle. According to Castle's theory this principle results from the interaction of an endogenous intrinsic factor and an extrinsic factor derived from the patient's diet. It is now shown that, with the elimination from the diet of those foods containing the extrinsic factor, the blood remission fails to appear after the expulsion of the worm. The addition of substances rich in protein, e.g. meat, milk, Hammarsten's casein, commercial peptone and yeast, which probably contain the “extrinsic” factor, quickly improves the blood values. R.T.L.

128—Actualidad Médica Mundial.

- *a. AGUIRRE, J. A., 1943.—“Radiología del quiste hidatídico del pulmón.” 13, 39-46.

129—Advisory Leaflet. Ministry of Agriculture and Fisheries. London.

- a. ANON, 1943.—“The beet eelworm.” No. 233, 4 pp.

130—Agricultural Gazette of New South Wales.

- a. ANON, 1943.—“Seed potatoes. Watch for scab and eelworm.” 54 (9), 428-429.
b. HUNGERFORD, T. G., 1943.—“Internal parasites of cattle may cause heavy losses in calves.” 54 (10), 479-483.
c. McCLYMONT, G. L., 1943.—“Internal parasites of horses. Methods of treatment.” 54 (11), 521-525.

(130b) In New South Wales young cattle become infested with worms mainly during the warmer months but may not show the effects until winter or early spring. It is a dangerous fallacy to think that drenching will suffice to control them. The nutrition must be adequate and wet marshy pastures and permanent calf paddocks avoided. R.T.L.

131—American Journal of Hygiene.

- a. BURROWS, R., 1943.—“Studies on the intestinal parasites of mental patients.” 38 (3), 293-305.

* Original not available for checking or abstracting.

132—American Journal of Tropical Medicine.

- a. MUMFORD, E. P. & MOHR, J. L., 1943.—“Background to post-war reconstruction. Part I. Preliminary report on parasitic and other infectious diseases of the Japanese Mandated Islands and Guam.” 23 (4), 381-400.
- b. MOST, H., 1943.—“Studies on the effectiveness of phenothiazine in human nematode infections.” 23 (4), 459-464.
- c. NEGHME, A. & OSSANDON, M., 1943.—“Ectopic and hepatic human fascioliasis.” 23 (5), 545-550.

(132a) [For abstract of this paper see Helm. Abs., Vol. XII, No. 28c.]

(132b) Phenothiazine has been administered with safety and success and without noteworthy toxicity to over 200 persons affected with *Enterobius vermicularis*. Its use for the present should be restricted to patients intolerant or refractory to gentian violet. The dosage should be computed on the basis of body weight, and a total dose of 300 mg./kg. of body weight administered over three days is suggested. On this basis doses are: children 2 to 5 years of age a total of 5 g.; 6 to 8 years 7.5 g.; 9 to 13 years 10 g.; and adults 15 g. Phenothiazine was not effective against *Ascaris lumbricoides*, *Necator americanus*, *Strongyloides stercoralis*, *Trichuris trichiura*, or *Schistosoma mansoni*. R.T.L.

(132c) The authors record a case of *Fasciola hepatica* in man in Chile. Only 6 cases have been reported for Chile hitherto. The patient had suffered from chronic cholelithiasis and eggs were found in the faeces. In addition an immature fluke was discovered in the subcutaneous tissues in an area of consolidation. The eosinophile count was 9%. R.T.L.

133—American Journal of Veterinary Research.

- a. KATES, K. C. & SHORB, D. A., 1943.—“Identification of eggs of nematodes parasitic in domestic sheep.” 4 (10), 54-60.
- b. ANDREWS, J. S. & MALDONADO, J. F., 1943.—“Some clinical aspects of experimental esophagostomiasis in cattle.” 4 (12), 211-225.

(133a) Kates & Shorb describe and illustrate by photographs eggs of 14 nematodes parasitic in sheep. It is possible to differentiate with reasonable accuracy with a little practice the eggs of these parasites, as found in the faeces. Besides shape and size, depth of colour of the morula is important and useful. Eggs of *Bunostomum*, *Haemonchus* and *Oesophagostomum* are very dark; of *Haemonchus*, *Trichostrongylus* and *Cooperia* are moderately coloured; of *O. circumcincta* are almost colourless. The stage of development of the embryo is also important. The eggs of *Ostertagia marshalli* and of *Nematodirus* spp. are the most difficult to differentiate, but this is not impossible. P.A.C.

(133b) Calves infected experimentally with larvae of *Oesophagostomum radiatum* are dull and listless, the coat rough and the faeces soft. When the larvae reach the 3rd larval stage in the intestinal wall about the 4th day and with the migration of the 4th stage from the mucosa on about the 10th day the temperature rises. From the 4th to the 23rd day after infection there is severe diarrhoea with anorexia which has subsided by the 186th day, by which time the intestinal mucosa has again become normal. Anaemia of about 50% develops about 5 weeks after the completion of infection but subsides with the recovery of the animal and is probably associated with the absorption of some helminth toxin which inhibits the production of red blood corpuscles. The weight gained daily was only one-seventh of that of healthy controls. The stunting effect was apparently permanent. The tropical diarrhoea of calves in Puerto Rico is indistinguishable from that due to *O. radiatum* infection. R.T.L.

134—American Midland Naturalist.

- a. HUGHES, R. C. & MOORE, G. A., 1943.—“*Acanthocephalus van-cleavei*, a new echinorhynchid worm, from a salamander.” 29 (3), 724-729.
- b. MIZELLE, J. D., LaGRAVE, D. R. & O'SHAUGHNESSY, R. P., 1943.—“Studies on monogenetic trematodes. IX. Host specificity of *Pomoxis Tetraonchinae*.” 29 (3), 730-731.
- c. MIZELLE, J. D. & CRONIN, J. P., 1943.—“Studies on monogenetic trematodes. X. Gill parasites from Reelfoot Lake fishes.” 30 (1), 196-222.

(134a) Hughes & Moore describe *Acanthocephalus van-cleavei* n.sp. from *Eurycea tynerensis* in Oklahoma. It can be distinguished by the presence of much-branched lemnisci in the

female and by dissimilar lemnisci in the male. The testes are elongated and there appear to be 7 cement glands, though most related Acanthocephala have only 6. P.A.C.

(134b) Mizelle et al. find that the two species of *Pomoxis* studied from Reelfoot Lake and elsewhere in North America show a strict specificity in regard to their infection with *Cleidodiscus* spp. (Tetraonchinae). *P. annularis* harbours *C. vancleavei*, *C. capax*, as well as *C. uniformis* and *C. longus*; *P. nigromaculatus* is infected with the first two species only. N.G.S.

(134c) Mizelle & Cronin find that in Reelfoot Lake *Lepomis microlophus* harbours 8 species of tetraonchid trematodes on the gills, 6 of which are new; but in Florida it had 5 species of these parasites, only one of which was common to the two localities. The new species are: *Actinocleidus bakeri* n.sp., *A. bifidus* n.sp., *A. crescentis* n.sp., *A. harquebus* n.sp., *Urocleidus torquatus* n.sp. and *U. variabilis* n.sp. *A. unguis* n.sp. is described from *Huro salmoides*. Ten other species of tetraonchids are re-examined and tabular comparisons given for some of them to show variations in different hosts and in different parts of the country. They find that for *Cleidodiscus pricei* the size of the parasite varies inversely as the number of specimens harboured by the different host species, and that for all previously described species those collected in the more northerly localities present a larger body size. N.G.S.

135—Analecta Medica.

- a. LÓPEZ ALBO, W., 1943.—“Diagnóstico clínico y biológico de la cisticercosis del sistema nervioso central y de las meninges.” 4 (1), 17-44; (2), 31-70.

136—Annals of Applied Biology.

- a. WILSON, G. F., 1943.—“The stem and bulb eelworm, *Anguillulina dipsaci* (Kühn, 1858): the importance of collating evidence on the behaviour of biologic strains.” 30 (4), 364-370.

(136a) Fox Wilson gives the results of experiments designed to test the host range of 7 biological races of the stem eelworm, *Anguillulina dipsaci*, of known ancestry. The technique employed is described and the results are set out in tabular form together with the chief findings of other workers in this field. A final section of the paper deals with the colour grouping of herbaceous phloxes in relation to infection with the parasite. White phloxes appear to be, on the whole, the least liable to infection. T.G.

137—Annals of Tropical Medicine and Parasitology.

- a. LOEWENTHAL, L. J. A., 1943.—“Cutaneous changes in onchocerciasis.” 37 (3/4), 147-148.

(137a) Loewenthal cites two cases of onchocerciasis in natives of Uganda in which itching of the skin over the buttocks began some months after the patient had left the endemic areas. Skin biopsy showed larvae of *Onchocerca volvulus*. The author is of opinion that the papular lichenified eruptions are due to the *Onchocerca* larvae and not to the bites of *Simulium damnosum*, as had been suggested. R.T.L.

138—Antiseptic. Madras.

- *a. DEBSARMA, D. N., 1943.—“Emergencies caused by *Ascaris*.” 40, 186-187.

139—Archives de l'Institut Pasteur d'Algérie.

- a. MARILL, F. G., 1943.—“Recherche des mollusques fluviatiles autour de grands barrages d'Algérie.” 21 (2), 65-82.

(139a) Marill has surveyed the waters in the neighbourhood of the great dams at Foum el Guéiss and at Oued Ksob in Algeria to determine their possible importance as breeding places for snails of the genus *Bulinus*, intermediaries for schistosomes. No molluscs were found in the streams or canal networks at either place, and analyses of water from various parts of the systems revealed that the acidity was too high for the survival of *Bulinus*. It was found, however, that the waters became increasingly alkaline towards the terminal canals of the network. The author stresses that his observations are incomplete, and confirmation of his findings is essential before any definite conclusion can be drawn. A.E.F.

140—Archives of Ophthalmology.

- a. GIFFORD, S. R. & KONNÉ, M., 1943.—“*Filaria loa* removed from upper lid.” 29 (4), 578–582.

141—Archives of Pathology.

- a. KRAKOWER, C., HOFFMAN, W. A. & AXTMAYER, J. H., 1943.—“Portal-systemic collateral veins in the guinea pig with schistosomal cirrhosis of the liver and a discussion of congestive splenomegaly.” 36 (1), 39–50.

(141a) The importance of the portal systemic collateral vein anastomoses in schistosomiasis is stressed, as these serve as convenient pathways by which the parasites and their pigment and ova can escape from the portal venous system. This explains the large numbers of adult worms which migrated from the portal system to the right side of the heart and to the lungs in experimentally infected rats which had been previously reported. A detailed study is now based on infection in guinea-pigs.

R.T.L.

142—Archivio Italiano di Chirurgia.

- a. ROSSI, G., 1943.—“Su di un caso di filariosi autoctona (*Filaria conjunctivae* Addario) a localizzazione premammaria.” 64 (6) 456–464.

(142a) A fourteenth human case of infection with *Filaria conjunctivae* is reported. The worm, an immature female about 8 cm. long, was removed under a local anaesthetic from a subcutaneous nodule in the mammary region. The patient was a peasant 36 years of age and came from S. Angela, da Carisio (Vercelli).

R.T.L.

143—Archivos del Hospital de Niños Roberto del Río.

- *a. LA MAZA S., V. DE, 1943.—“Parasitosis intestinal. Diarreas crónicas.” 11, 37–45.

144—Archivos de la Sociedad de Biología de Montevideo.

- a. GRAÑA, A., VARELA RODRÍGUEZ, B. & OEHNINGER, C., 1943.—“Standardización de los antígenos empleados en el tratamiento biológico de la hidatidosis.” 11 (1/2), 65–70.

145—Archivos Uruguayos de Medicina, Cirugía y Especialidades.

- a. LARGHERO YBARZ, P. & PURRIEL, P., 1943.—“Equinococosis pleural.” 22 (1), 56–66. [Discussion pp. 67–69.]
b. GROLERO, M. A., 1943.—“Modificación del Dr. Barsabas Ríos a la técnica de los Dres. Lamas y Mondino en el tratamiento de los quistes hidáticos del pulmón.” 22 (1), 80–91.

146—Army Medical Bulletin.

- *a. HORACK, H. M., 1943.—“Medical and sanitary data on British Solomon Islands Protectorate.” 65, 1–17.

147—Australian and New Zealand Journal of Surgery.

- a. BROWN, H., 1943.—“Hydatid cyst in the female pelvis.” 12 (3), 227–228.
b. BARNETT, L., 1943.—“Hydatid cysts: their location in the various organs and tissues of the body.” 12 (4), 240–248.

148—Australian Veterinary Journal.

- a. CLARE, N. T. & SIMPSON, J. E. V., 1943.—“An apparent Van den Bergh reaction in sheep dosed with phenothiazine.” 19 (4), 116–117.

(148a) Clare & Simpson show that a test for bilirubin should not be made within 48 hours of dosing with phenothiazine, because certain derivatives of phenothiazine produce a colour liable to be confused with azobilirubin. It is possible, however, to distinguish between true and false Van den Bergh reactions, as the false reaction is produced by addition of only sodium nitrate and hydrochloric acid without sulphanilic acid.

P.A.C.

149—Boletín de la Asociación Médica de Puerto Rico.

- a. PÉREZ, B., 1943.—“Quiste hidatídico del pulmón.” 35 (4), 129-142.
- b. FONT, J. H., 1943.—“*Syngamus laryngeus* in man. Report on three additional cases from Puerto Rico.” 35 (9), 331-333.

(149b) Font gives brief clinical histories of the two cases of oropharyngeal syngamosis which were presented to the Havana Programme of the 1938 Pan American Medical Congress. He now adds a third case. The worms are diagnosed as *Syngamus laryngeus* of cattle. R.T.L.

150—Boletines y Trabajos. Academia Argentina de Cirugía.

- *a. VELASCO SUÁREZ, C., 1943.—“Hidatidosis múltiple del hígado. Rara complicación operatoria.” 27, 19-32.

151—Brasil-Medico.

- a. CANÇADO, J. R., 1943.—“Schistosomose mansoni: estudo clínico e terapêutico.” 57 (34/35), 348-353.
- b. CANÇADO, J. R., 1943.—“Incidência da estrongiloidíase à tubagem duodenal.” 57 (36/37), 370-371.

(151b) Continuing his observations on the incidence of *Strongyloides stercoralis* in Brazil [see Helm. Abs., Vol. IX, No. 408c and Vol. XII, No. 2a] Cançado has examined 1,142 persons by duodenal tube: 103 (9%) were infected. P.A.C.

152—British Journal of Surgery.

- a. D'ABREU, A. L. & ROGERS, L., 1943.—“Bilateral pulmonary hydatid cysts.” 31 (122), 153-155.

153—Bulletin of the Natural History Society of Maryland.

- a. HOWDEN, H., 1943.—“Control of diseases and parasites of snakes.” 13 (3), 41-44.

(153a) In the course of his notes on the control of diseases in live snake collections, Howden records that during the winter of 1941-1942 trematodes [unspecified] were found in the mouth of *Drymarchon corais couperi*, *Natrix sipedon sipedon*, *Agkistrodon piscivorus*, and *Elaphe quadrevittata quadrevittata*: the snakes were part of a collection of 42 specimens. It is recommended that the worms be carefully removed from the mouth before they reach the lungs or intestines, and that infected snakes should be segregated. A.E.F.

154—Bulletin. Oklahoma Agricultural Experiment Station.

- a. BRIGGS, H. M. & SMITH, H. C., 1943.—“Phenothiazine for control of stomach worms in sheep.” No. 263, 8 pp.

(154a) Seven common methods of administering phenothiazine for the treatment of *Haemonchus contortus* in sheep were tested and all proved very effective in routine dosing for prevention. The efficiency ranged from 99.7% to 100%. Copper sulphate as a 1% solution was also tested and removed 98.8%. Because of the cost phenothiazine could probably be given twice a year whereas the standard copper sulphate and steeped tobacco drench could be used once a month. The life-cycle of *Haemonchus contortus* is such that sheep can become re-infected every 30 days. Comparative treatments of sheep already seriously ill were not studied. R.T.L.

155—Canadian Journal of Research. Section D. Zoological Sciences.

- a. MacLULICH, D. A., 1943.—“Parasites of trout in Algonquin Provincial Park, Ontario.” 21 (12), 405-412.
- b. CAMERON, T. W. M., 1943.—“Studies on trichinosis. IV. Human incidence in Montreal.” 21 (12), 413-414.

(155a) MacLulich has collected information on the distribution and abundance of parasites of the several species of trout of 34 lakes in Algonquin Park, Ontario, and the data showing the details have been deposited with the Royal Ontario Museum of Zoology. The

helminths recorded are *Crepidostomum farionis*, a single specimen of *Clinostomum complanatum*, "blackspots" containing probably *Apophallus* larvae in speckled trout, and *Azygia angusticauda* in a lake trout. Plerocercoids of *Diphylllobothrium* sp., possibly *D. cordiceps*, which occurred in lake trout, but not in the speckled trout, were found in cysts in the wall of the stomach and adjacent tissues. The infection was abundant in the lakes Big Crooked, Canisbay, Head, Louisa, Source, Mckaskill, Butt and Redrock. The fish in Louisa Lake averaged 28 plerocercoids each, whereas those from Lake Opeongo were entirely free from infection. The adult tape-worms found were *Eubothrium salvelini*; these occurred in 85% of the lake trout and 66% in speckled trout. *Proteocephalus parallacticus* was abundant in the majority of the lake trout. *P. pusillus* and *P. ambloplitis* are also reported. The only nematodes recorded are: (i) *Cystidicola stigmatura* in the air bladders of lake trout and speckled trout in Hogan and Wilkes Lakes. The infestations were severe. (ii) *Philonema* sp. which occurred infrequently only in lake trout from Lake Opeongo; and (iii) unidentified nematodes encysted in the viscera and others in the intestines. *Leptorhynchoides thecatus* was restricted to a few lake trout from Lake Opeongo. R.T.L.

(155b) A 1.5% incidence of trichina infection was found in 539 diaphragms collected from unselected cases at the Royal Victoria Hospital, Montreal. Cameron believes that these infections resulted from eating under-cooked rather than uncooked pork, and recalls that the incidence of pig trichinosis in Eastern Canada is 0.57%. R.T.L.

156—Clinical Journal.

- a. CAWSTON, F. G., 1943.—"Intensive treatment of schistosomiasis." 72 (2), 71-72.

157—Clinical Proceedings. Journal of the Cape Town Post-Graduate Medical Association.

- a. GELFAND, M. & OSBURN, H. S., 1943.—"Katayama in Southern Rhodesia." 2 (7), 169-173.

(157a) [The term "Katayama" disease has hitherto been used in literature for infection with *Schistosoma japonicum* and was so named because it was first observed in the neighbourhood of the village of Katayama, in Japan.] Katayama is here used, misleadingly, for the early clinical symptoms of itchy skin eruption, persistent pyrexia and a high eosinophilia associated with a history of bathing some weeks previously in an infected river. Later the patient, whose history is cited, passed ova of *Schistosoma mansoni* and *S. haematobium*. There is no evidence that *S. japonicum* occurs in Southern Rhodesia. R.T.L.

158—Cornell Veterinarian.

- a. FENSTERMACHER, R., OLSEN, O. W. & POMEROY, B. S., 1943.—"Some diseases of white-tailed deer in Minnesota." 33 (4), 323-332.
- b. BRITTON, J. W., MILLER, R. F. & CAMERON, H. S., 1943.—"Phenothiazine salt mixtures in the control of parasitism." 33 (4), 339-343.
- c. WILLMAN, J. P. & BAKER, D. W., 1943.—"Copper sulfate-nicotine sulfate solution and phenothiazine compared as anthelmintics for lambs." 33 (4), 365-368.
- d. BRITTON, J. W., 1943.—"Phenothiazine poisoning in pigs." 33 (4), 368-369.

(158a) In examining post mortem a number of deer carcasses in Minnesota, Fenstermacher et al. recovered a number of helminths. Hydatid of the lung occurred twice. *Fascioloides magna* occurred in 20% of the livers and had caused a certain amount of damage, which is described. P.A.C.

(158b) Britton et al. had great success in preventing parasitism in lambs with access to a phenothiazine-salt mixture. These lambs showed a significant increase in weight over the controls which had only salt. There were no deaths from parasitism and no unthriftiness. They had access to the mixture for a period of 11 months: it was not toxic and was apparently not unpleasant to the taste. P.A.C.

(158c) The relative value of treatment with nicotine-copper sulphate mixture and phenothiazine in lambs not suffering from worm parasitism has been studied. The

parasitological examination of the gut in 55 lambs showed no difference in the effectiveness of these two treatments in the control of *Haemonchus contortus*, but phenothiazine seemed to be more effective against *Nematodirus spathiger*. R.T.L.

(158d) On the morning after 64 pigs were given a little grain mixed with 1.5 lb. phenothiazine (11.7 g. per head) all showed posterior paralysis, marked inco-ordination, running movements, circling, and stupor. By the 5th day all were again normal except for a few which developed a corneal opacity which tended to disappear in a week. The pigs had been diagnosed as suffering from necrotic enteritis, ascariasis and secondary pneumonia before treatment. R.T.L.

159—Deutsche Medizinische Wochenschrift.

a. LINNEWEH, F. & HARMSSEN, 1943.—“Zur Allergie bei Trichinose.” 69 (17/18), 359–363.

(159a) An examination of the allergic responses of a number of trichinous patients showed again the usefulness of the Casoni reaction and the complement fixation test in the diagnosis of the disease. The Casoni test has also the great advantage of being easy to carry out. Antigens can be successfully made from rat or pig material. P.A.C.

160—Deutsche Tropenmedizinische Zeitschrift.

a. DRENOWSKY, A. K., 1943.—“Helminthologische Untersuchungen im Distrikt Petritsch (Südbulgarien).” 47 (4), 94–96.

(160a) Drenowsky has examined (by a modified Willis flotation technique) the faeces of 1,108 school children from Petritsch (southern Bulgaria). *Ascaris lumbricoides* was found in 402 cases (36.28%), *Trichuris trichiura* in 88 (7.94%), *Hymenolepis nana* in 56 (5.05%), and *Enterobius vermicularis* in 13 (1.18%). There were 110 cases of mixed infections. A.E.F.

161—Deutsches Tuberkulose-Blatt.

*a. KLUCK, 1943.—“Verkalkte Echinokokkuszyste.” 17, 11–15.

162—East African Medical Journal.

a. IRVINE, C., 1943.—[Taenia infection in lepers and tuberculosis patients. *Ascaris* infection.] [Correspondence.] 20 (8), 285–286.

(162a) At least 33% of lepers admitted to hospital had *Taenia saginata*. Cases of pulmonary tuberculosis similarly showed a considerable degree of infection, whereas others, even those admitted for anthelmintic treatment, showed a lower percentage. Irvine remarks on the colic and distension which is frequently associated with the presence of one or two ascaris worms whereas in those cases with hundreds present there are no noticeable ill effects. R.T.L.

163—Farmer and Stock Breeder.

a. ROBINSON, L. E., 1943.—“Early dosing for worm control.” 57 (2795), 702.
b. GIBSON, T. E., 1943.—“Controlling worms in pigs.” 57 (2812), 1358.

164—Farmers' Bulletin. U.S. Department of Agriculture.

a. DOOLITTLE, S. P., 1943.—“Tomato diseases.” No. 1934, 83 pp. [Root-knot, pp. 53–55.]

165—Farmer's Weekly. Bloemfontein.

a. ELLIOT, W., 1943.—“The farmer alone cannot eradicate measles.” 65, 26–27.
b. ELLIOT, W., 1943.—“Real root of the measly meat problem.” 65, 170–171.

(165a) Elliot claims that eradication of cysticercosis in beef is primarily a responsibility of the Departments of Public Health, Native Affairs, and the Veterinary Administration. Half the cattle in the Union of South Africa is in native ownership. Large numbers of cattle and pigs are killed annually by the natives and consumed at weddings and beer-drinks and other festive occasions, and large numbers which die are also eaten. It is utterly impossible for the farmer to control the infection even on European-owned farms owing to the habits of the natives. R.T.L.

(165b) Elliot [continuing the preceding article] considers that the elimination of the adult tapeworms from human carriers is the prime requirement. As the responsibility of the Public Health Department is administration and not research he urges that further research should be instigated to discover a new safe specific drug for taeniasis. R.T.L.

166—Farming in South Africa.

- a. MÖNNIG, H. O., 1943.—“Worms in cattle.” 18 (212), 824.

167—Florida Grower.

- *a. WATSON, J. R., 1943.—“Flowers that resist root-knot. Overcoming a garden barrier by plant selection.” 51 (7), 14.

168—Health Bulletin. North Carolina.

- a. SISK, W. N., 1943.—“Important intestinal parasites in western North Carolina.” 58 (3), 13-15.

(168a) *Ascaris lumbricoides* and *Oxyuris vermicularis* are the only helminths found commonly in man in western North Carolina. This article tells laymen the simple facts concerning their treatment and control. R.T.L.

169—Indian Journal of Pediatrics.

- a. FERNANDO, P. B. & BALASINGHAM, S., 1943.—“Acute ascariasis in children.” 10 (40), 149-173.

(169a) There is a paucity of literature on the clinical aspects of ascariasis, which is the cause of much morbidity and considerable mortality in children in the tropics. The authors have studied 162 cases of acute ascariasis which occurred in a total of 3,564 patients (i.e. 4.6%) admitted to the Hospital for Children at Colombo. 90% of the cases were well nourished and apparently healthy. In 53% the clinical picture was one of acute gastro-enteritis with or without colitis, 20.9% had symptoms of acute abdomen, chiefly due to partial obstruction. 9.3% were cases of cerebral or general intoxication; 7.4% showed respiratory disturbances. In less than 1% the symptoms were attributable to the migratory activity of the adult worms. Symptoms may be caused by direct toxic action or as a result of anaphylactic and allergic reactions. In the list of diseases admitted to the Hospital acute ascariasis came third among the causes of death, yielding precedence only to pneumonia, and diarrhoea and vomiting. R.T.L.

170—Indian Medical Gazette.

- a. RAO, S. S., 1943.—“The result of amputation of a limb for filarial lymphangitis and elephantiasis.” 78 (2), 79.
b. HEILIG, R. & VISVESWAR, S. K., 1943.—“Does a hookworm toxin exist?” 78 (12), 578-583.

(170a) The only benefit conferred by amputation of an elephantiasis leg was due to a reduction in the weight. In the stump there was a recurrence of lymphangitis and elephantiasis. R.T.L.

(170b) From data derived from 14 cases of uncomplicated hookworm anaemia before and after medication with massive doses of iron as Bland's pills and before and after anthelmintic treatment the authors believe they have shown the existence of a toxic influence of the hookworm on the heart muscle, and that these conclusions are supported by experiments on the isolated frog heart. R.T.L.

171—Iowa Veterinarian.

- a. ANON, 1943.—“Nodular and stomach worms in sheep.” 14 (6), 12-13, 22.

172—Journal of the American Medical Association.

- a. REIMANN, H. A., PRICE, A. H. & HERBUT, P. A., 1943.—“Trichinosis and periarteritis nodosa: differential diagnosis; possible relationship.” 122 (5), 274-279.

(172a) Two cases regarded clinically as trichinosis showed typical tissue lesions of periarthritis nodosa during life. The authors think that trichinosis as a disease with strong allergic manifestations may occasionally cause the syndrome called periarthritis nodosa.

R.T.L.

173—Journal of the Council for Scientific and Industrial Research. Australia.

- a. WHITLOCK, H. V., 1943.—“A method for preventing the development of strongylid eggs in sheep faeces during transport and storage.” 16 (4), 215–216.

(173a) Whitlock finds that if a half-inch plug of absorbent cotton wool soaked in orthodichlorobenzene is placed at the bottom of a test tube 5 in. by $\frac{1}{2}$ in., about 5 g. of sheep faeces can be forwarded by rail or post to distant laboratories. The eggs are killed but do not lose their floatability. By this means egg counts by the dilution-flotation technique can be carried out three weeks after collection if the tube is plugged with cotton wool and corked.

R.T.L.

174—Journal of the Department of Agriculture. Western Australia.

- a. TOOP, C. R., 1943.—“Worms in pigs.” 20 (1), 59–62.

175—Journal of the Elisha Mitchell Scientific Society.

- a. HARKEMA, R., 1943.—“The cestodes of North Carolina poultry with remarks on the life history of *Raillietina tetragona*.” [Abstract of a paper presented at the 42nd Annual Meeting of the North Carolina Academy of Science, Duke University, Durham, April 30 and May 1, 1943.] 59 (2), 127.

(175a) From a batch of 500 chickens in North Carolina, Harkema obtained 5 cestode species: *Raillietina tetragona*, *R. cesticillus*, *R. echinobothrida*, *Hymenolepis carioca* and *Choanotaenia infundibulum*. Species of ants, *Pheidole vinelandica*, *P. dentata* and *P. sp.* are capable of acting as vectors for *R. tetragona* and experimental work indicates that they become infected in the larval stages, the parasites successfully withstanding the changes which occur during metamorphosis.

P.A.C.

176—Journal of Helminthology.

- a. GOODEY, T., 1943.—“On the systematic relationships of the vinegar eelworm, *Turbatrix aceti*, and its congeners, with a description of a new species.” 21 (1), 1–9.
 b. GOODEY, T., 1943.—“On *Rhabditis curvicaudata* (Schneider) and *R. paraciliata* n.sp.” 21 (1), 10–17.
 c. GOODEY, T., 1943.—“A note on the feeding of the nematode, *Anguillulina macrura*.” 21 (1), 17–19.
 d. GOODEY, T., 1943.—“On the status of *Aphelenchus agricola* Maupas, 1900, with remarks on the genus *Paraphelenchus*.” 21 (1), 20–21.
 e. GOODEY, T., 1943.—“*Anguillulina dipsaci* in the inflorescence of onions and in samples of onion seed.” 21 (1), 22–30.
 f. GOODEY, T., 1943.—“Tulip bulbs attacked by *Anguillulina dipsaci*.” 21 (1), 30–32.
 g. WALLACE, E. R. & WOOD, J., 1943.—“Stem eelworm in onion bulbs, probably seed-borne in origin.” 21 (1), 33–36.
 h. FENWICK, D. W., 1943.—“A refinement of Gemmell's single cyst technique.” 21 (1), 37–41.
 i. FENWICK, D. W., 1943.—“Note on the use of picric acid as a hatching agent.” 21 (1), 41–42.

(176a) Goodey discusses the systematic relationships of the vinegar eelworm and its congeners. He erects a new subfamily, Turbatricinae, belonging to the Cephalobidae, for their reception, and creates a new genus *Turbator* for the sour paste eelworm to which he assigns 6 other species, one of which, *Turbator redivivoides*, is described and figured as a new species.

T.G.

(176b) Goodey redescribes and figures adult males and females of *Rhabditis curvicaudata* (Schneider) the larvae of which were found encircling the bodies of *Psychoda* flies breeding in the surface slime of sewage filter beds at Leeds by Mr. G. H. Satchell. He also gives a description of *Rhabditis paraciliata* n.sp.

T.G.

(176c) Goodey has found that adults of *Anguillulina macrura*, a common associate of grass roots in pastures at St. Albans, may enter roots with the anterior region of the body. He figures a male of *A. macrura* in which the oesophageal region is lying embedded in the cortical cells of a root of *Lolium perenne*, whilst the bulk of the body hangs outside the root. T.G.

(176d) Goodey discusses the systematic position of *Aphelenchus agricola* of Maupas, 1900, which in his view is synonymous with *Aphelenchus avenae* Bastian, 1865. He thus removes it from the genus *Paraphelenchus* in which it had been placed by Micoletzky. He shows that the male nematode described by de Man in 1921 as *Aphelenchus agricola* belongs to *Paraphelenchus* and names it *P. arenaceus* nom. nov. T.G.

(176e) Goodey has found the stem eelworm, *Anguillulina dipsaci*, invading the inflorescence and flower stem of onions grown for seed. The worms occur abundantly in these regions and accompany the seed as it ripens and after it is thrashed. Photomicrographs showing the worms *in situ* in the ovary wall, in a pedicel and in the tissues of the flower stem illustrate the paper. He also shows that viable worms may occur on samples of English grown onion seed as distributed by seeds merchants. T.G.

(176f) Goodey reports the presence of the stem eelworm, *Anguillulina dipsaci*, in tulip bulbs of the varieties "Telescopium" and "Rynland" from Lincolnshire. Bulbs become severely affected and show typical brown-ring symptoms, and eelworm "wool" was found under the tissues of the basal plate in one or two examples. T.G.

(176g) Wallace & Wood describe evidence of an attack of the stem eelworm, *A. dipsaci*, in onions grown in Lincolnshire, and lifted at different dates for evidence of the occurrence of neck rot due to fungal diseases. Four varieties of onions were sown but eelworm attack occurred almost entirely and mainly manifested itself late in the season in one variety only. Examination of the remainder of the seed of this variety, made by Goodey, revealed the presence of *A. dipsaci* and the conclusion is drawn that, in all probability, the disease was seed-borne in origin. T.G.

(176h) Fenwick describes a modification of Gemmell's single cyst technique. He uses for this purpose small home-made glass cells mounted on a single sheet of glass and each designed to contain a single cyst. The arrangement allows for fifty cells to be accommodated per sheet, the whole being enclosed in a large Petri dish. The method of preparing the dishes is described and the advantages of the technique explained. D.F.

(176i) Fenwick records the fact that 0.01-0.02% solutions of picric acid can stimulate the emergence of the larvae of *Heterodera rostochiensis* from their cysts, although the stimulating effect of this substance is vastly inferior to that of good potato or tomato root excretion. D.F.

177—Journal of Immunology.

- a. ROSE, H. M., 1943.—"On the occurrence of Forssman antigen in *Trichinella spiralis*." 47 (1), 53-57.

(177a) Rose has examined the sera of 17 cases of *Trichinella spiralis* but is not able to confirm Mauss's suggestion [see Helm. Abs., Vol. X, No. 250a] that Forssman antigen is present in the parasite. All titres for sheep erythrocyte agglutinins and haemolysins fell within normal range, and rabbits artificially infested with the parasite under controlled conditions did not develop heterophile antibody. A possible explanation of Mauss's findings may be that the rabbits were already infected with *Pasteurella leptiseptica*, which contains Forssman antigen. P.A.C.

178—Journal of Infectious Diseases.

- a. OLIVER-GONZÁLEZ, J., 1943.—"Antigenic analysis of the isolated tissues and body fluids of the roundworm, *Ascaris lumbricoides* var. *suum*." 72 (3), 202-212.
 b. WRIGHT, G. G. & OLIVER-GONZÁLEZ, J., 1943.—"Electrophoretic studies on antibodies to *Trichinella spiralis* in the rabbit." 72 (3), 242-245.
 c. MELCHER, L. R., 1943.—"An antigenic analysis of *Trichinella spiralis*." 73 (1), 31-39.

(178a) Antibodies appeared in the sera of rabbits immunized with adult *Ascaris lumbricoides* var. *suum* and the sera caused precipitation round the mouth, excretory pore, anus and cuticle of *Ascaris* larvae obtained from the lungs of guinea-pigs. A large percentage of the larvae were killed after treatment with these immunized sera. Antibody production was induced by injection of powdered cuticle, egg, intestine, muscle, sperm and coelomic fluid, but those produced by cuticle and egg were the most lasting and most efficient. P.A.C.

(178b) Wright & Oliver-Gonzalez have analyzed electrophoretically the sera of rabbits during the course of *Trichinella spiralis* infection. As immunity develops there is a marked increase in the amount of gamma globulin present, particularly in the period in which the anti-larval immunity reaches its peak. Later there was a fall and this was not influenced by super-infection. This gamma globulin fraction contained antibodies effective against both larva and adult. P.A.C.

(178c) An electrical analysis of extract of *Trichinella spiralis* has shown that the acid-soluble protein fraction is a complete antigen causing the production of antibodies in rabbits. They reacted with specific antibody but not with antibody from *Ascaris suum*. The polysaccharide fraction had some antigenic value but would not give skin tests, while the lipid fraction is not yet fully investigated. P.A.C.

179—Journal of the Iowa State Medical Society.

- a. GREENE, J. A., 1943.—"Tropical diseases in Iowa in the postwar era." 33 (10), 455-460.

(179a) Greene discusses the probability of tropical diseases being brought to Iowa after the war by returning soldiers. He includes schistosomiasis, filariasis and dracontiasis among the diseases which he considers may be introduced and which "may have a chance of becoming endemic". A.E.F.

180—Journal of the Louisiana State University School of Medicine.

- *a. HOOD, M., 1943.—"Increased importance of parasitology in the world today." 4, 3.

181—Journal of Neuropathology and Experimental Neurology.

- a. NEUMANN, M. A., 1943.—"*Cysticercus cellulosae* of the brain: report of a case." 2 (2), 197-202.

(181a) Neumann gives a detailed case history of *Cysticercus cellulosae* in a U.S. sailor who had been on continuous service in the Far East from 1925 to 1932. A.E.F.

182—Journal of Obstetrics and Gynaecology of the British Empire.

- a. GILBERT, B., 1943.—"Schistosomiasis (bilharziasis) of the female genital tract and neighbouring tissues." 50 (5), 317-336.

183—Journal of Parasitology.

- a. SPURLOCK, G. M., 1943.—"Observations on host-parasite relations between laboratory mice and *Nematospiroides dubius* Baylis." 29 (5), 303-311.
- b. FERGUSON, M. S., 1943.—"In vitro cultivation of trematode metacercariae free from microorganisms." 29 (5), 319-323.
- c. BROOKS, F. G., 1943.—"Larval trematodes of northwest Iowa. I. Nine new xiphidocercariae." 29 (5), 330-339.
- d. BROOKS, F. G., 1943.—"Larval trematodes of northwest Iowa. II. Four new strigeids." 29 (5), 340-347.
- e. BROOKS, F. G., 1943.—"Larval trematodes of northwest Iowa. III. A new collarless echinostome cercaria." 29 (5), 347-349.
- f. FERGUSON, M. S., 1943.—"Experimental studies on the fish hosts of *Posthodiplostomum minimum* (Trematoda: Strigeida)." 29 (5), 350-353.
- g. SEALANDER, J. A., 1943.—"Notes on some parasites of the mink in southern Michigan." 29 (5), 361-362.
- h. SCHECHTER, V., 1943.—"Two flatworms from the oyster-drilling snail, *Thais floridana haysae* Clench." 29 (5), 362.
- i. HAMANN, C. B., 1943.—"Estimation of histamine in the blood and other tissues of rats and guinea pigs infected with *Trichinella spiralis*." 29 (6), 367-372.

- j. JONES, A. W., 1943.—“A further description of *Stempellia moniezi* Jones, 1942, a microsporidian parasite (Nosematidae) of cestodes.” 29 (6), 373-378.
- k. CRAWFORD, W. W., 1943.—“Colorado trematode studies. I. A further contribution to the life history of *Crepidostomum farionis* (Müller).” 29 (6), 379-384.
- l. MANTER, H. W., 1943.—“One species of trematode, *Neoreimer grandispinus* (Caballero, 1938) attacked by another, *Mesocercaria marciae* (La Rue, 1917).” 29 (6), 387-392.
- m. GOBLE, F. C. & DOUGHERTY, E. C., 1943.—“Notes on the lungworms (genus *Protostrongylus*) of varying hares (*Lepus americanus*) in eastern North America.” 29 (6), 397-404.
- n. TODD, A. C., 1943.—“*Thelastoma iceni* (Schwenck), a nematode of cockroaches.” 29 (6), 404-406.
- o. STOLL, N. R., 1943.—“The wandering of *Haemonchus* in the sheep host.” 29 (6), 407-416.
- p. LARSH, jr., J. E., 1943.—“Increased infectivity of the eggs of the dwarf tapeworm (*Hymenolepis nana* var. *fraterna*) following storage in host feces.” 29 (6), 417-418.
- q. LARSH, jr., J. E., 1943.—“Comparing the percentage development of the dwarf tapeworm, *Hymenolepis nana* var. *fraterna*, obtained from mice of two different localities.” 29 (6), 423-424.
- r. MALDONADO, J. F., 1943.—“A note on the life cycle of *Tamerlanea bragai* Santos, 1934 (Trematoda: Eucotylidae).” 29 (6), 424.
- s. KUNTZ, R. E., 1943.—“*Cysticercus* of *Taenia taeniaeformis* with two strobilae.” 29 (6), 424-425.

(183a) Spurlock has investigated the reactions of various inbred strains of mice to infestation with *Nematospiroides dubius*. The strain known as A-W showed a high mortality rate, but tended to show a little more resistance at 5 months than at 1 month. P.A.C.

(183b) Ferguson is able to cultivate the cercariae of *Diplostomum flexicaudum* in various media without micro-organisms. The lenses of the eyes of various vertebrates were the bases of these culture media but the salt content was important. Though the resulting metacercariae were normal morphologically, he was not successful in his attempts to infect chickens or laughing gulls. P.A.C.

(183c) Brooks finds that 5 of the new xiphidiocercariae described by him from snails in the Okobojo region form a natural subgroup—the Conniae division—within the Polydena group of Cort (1915) and they are characterized by a javelin-shaped stylet without a basal bulb. He emphasizes the specific value of the shape and size of the stylet in this group, since the length seldom varies more than one micron in individuals of the same species. *C. conniae* n.sp. is from *Stagnicola palustris elodes*, *C. dorotti* n.sp. is from *S. umbrosa*, and the following members of the Conniae division are found in both *Stagnicola* spp.: *C. argenti* n.sp., *C. nolfi* n.sp. and *C. aalbui* n.sp. *C. kingi* n.sp. from *S. umbrosa* is one of the Ornatae, belonging to the Prima group. The remaining three Armatae are not allocated to special groups: *C. lajeae* n.sp. from *Physella elliptica* is shown to have resemblances to *Renifer* spp.; *C. diamondi* n.sp. from the same host is like *C. holthauseni* Rankin and *C. tricystica* Miller; while *C. pili* n.sp. from *Helisoma trivolvis* is most like *C. tridena* Miller. N.G.S.

(183d) Four new furcocercous cercariae of the strigeid type have been described by Brooks from Iowa: *C. okoboensis* n.sp., in *Stagnicola umbrosa* and *Physella elliptica*, has 4 pairs of penetration glands posterior to the acetabulum; *C. stephensi* n.sp. in *Lymnaea stagnalis jugularis* has 4 pairs of penetration glands anterior to the acetabulum; *C. leplei* n.sp. in *Physella elliptica* has a tail stem longer than the body or furcae, and 2 pairs of penetration glands; and *C. stomii* n.sp. in *L. stagnalis jugularis* also has 2 pairs of penetration glands but the tail stem is longer than the body or furcae. The relationships of the last two species with the others are discussed, and the characters of the sporocysts of all species are given. N.G.S.

(183e) *Cercaria ornatocauda* n.sp., described by Brooks, is an echinostome cercaria without spines or collar, and belongs to the Reflexae group. It has a typical redia and is common in *Stagnicola umbrosa*, *S. palustris elodes* and *Helisoma trivolvis* in northwest Iowa. It most nearly resembles the cercaria of *Psilostomum reflexae*, but is distinguished by its ornate tail-fins. N.G.S.

(183f) Ferguson has been able to confirm that there are two lines of cercariae of *Posthodiplostomum minimum* which are strictly selective as to metacercarial host: he compares two lines, in Cyprinidae (minnows) and Centrarchidae (sun-fish), but finds no morphological difference between them except that the former are smaller on the average, though there is an overlap in size range. It is suggested that the size of host in relation to the number of parasites

present, and the site of the cyst, may have some influence on the ultimate size of the parasite. The adults of the minnow strain in experimental birds were also smaller than those of the other strain. It is pointed out that both strains will inhabit the same snail and bird host. A review of the literature shows that it is uncertain to which line those cercariae and adults, which have been described in detail, belong.

N.G.S.

(183g) Sealander stresses the importance of data on cyclic fluctuations of parasites in helping to elucidate trends in the regulation of populations of their hosts. Numerous wild *Mustela vison* mink were examined in 1940 and 1941, and chi-squared tests showed no significant difference in intensity of infection in the two years. The 5 helminths of importance were present in the following average percentages: *Skjrabingylus nasicola* 94%, *Filaroides bronchialis* 19%, *Paragonimus kellicotti* 9%, *Physaloptera* sp. (larvae and adults) 4%, and *Diocetophyme renale* 3%. In spite of its low recorded incidence, the latter is considered the most important owing to the total damage it effects. Special observations are given regarding these and other parasites in mink.

N.G.S.

(183h) Schechter in experimenting with *Thais floridana haysae* at different salinities, finds that the polyclad turbellarian *Hoploplana inquilina* Wheeler emerged from the host at reduced salinities, and the cercaria of *Parorchis acanthus* emerged at relatively high salinities. *H. inquilina* was much larger than those found at Woods Hole (the latter being again larger than the Delaware Bay and Florida specimens), and it is noted that the snails from the present locality (Baratana Bay, west of the Mississippi River) were of exceedingly large size. This is the first record for both parasites in this region of the Gulf Coast, and it is concluded that they crossed the freshwater barrier during the transplantation of Louisiana oysters.

N.G.S.

(183i) Hamann found that *Trichinella spiralis* infected rats (16 to 18 days after infection) and guinea-pigs (23 to 26 days after infection) showed elevated mean values of blood histamine. Other tissues gave less conclusive results.

W.P.R.

(183k) Experimental proof of the life-history of *Crepidostomum farionis* parasitizing *Salmo irideus* in high altitude ponds in the Rocky Mountains has been given by Crawford. No free miracidia were found, but rediae containing all stages of development were found in the gills of *Pisidium* sp. On being fed to *Ephemera* sp. naiads, they developed into oval cysts in the abdomen—natural infections in the ponds were heavy and frequent, though naiads in the river were seldom infected and therefore used as experimental hosts in which the metacercariae became infective to trout in a fortnight. Extruded cells loaded with highly refractile bodies were present in the excretory bladder of the metacercariae and are thought to originate from the lining of the cercarial bladder. Anatomical details are given and compared with current descriptions of this species.

N.G.S.

(183l) Manter reviews the hyperparasitic helminths of trematodes and describes the first case of a hyperparasitic larval trematode attacking the adult stage of another species. *Mesocercaria marcianae* (Alariinae) had penetrated 13 out of 300 *Neoreneifer grandispinus* (Caballero) n. comb. [= *N. drymarchon* Byrd & Denton, = *Renifer longispinus* Caballero] in the oesophagus of *Drymarchon coris*—a snake from the Nebraska Zoo, originating in Florida, where the latter infestation was contracted, though *Mesocercaria* was probably acquired in captivity. The spinose cuticle had been eroded and in some cases slight regrowth had begun; in some there was castration due to damage to gonads or obstruction of ducts: 30% of the attacked trematodes were multiple infestations. One of the *Mesocercaria*, at least, was dead and decomposition of its tissues had begun.

N.G.S.

(183m) Goble & Dougherty propose the name of *Protostrongylus boughtoni* for the nematode usually known as *Synthetocaulus leporis* from varying hares in eastern North America. The genus *Protostrongylus* has 2 years priority over *Synthetocaulus* and the use of the specific names *leporis* and *cuniculi* are precluded by the rules of nomenclature. The authors take the opportunity of amplifying the description of the species.

P.A.C.

(183n) Todd has recovered *Thelastoma icemi* from *Periplaneta americana* and *P. brunnea*, both records being new. The male worm is described for the first time. Geographically the parasite was found in cockroaches from Nebraska, Texas and Louisiana.

P.A.C.

(1830) Stoll has uniformly failed to confirm Ransom & Foster's (1920) statement that the larvae of *Haemonchus contortus* migrate through the lungs of the guinea-pig. He has also failed to obtain evidence of such migration in sheep, rats and rabbits. There is, however, a minor degree of pseudo-migration by the 3rd stage larvae into the gastric pits which receive the rubules of the glands following normal oral infection. A few show the tail extruding from the mucosal surface but most are hidden in the upper third or half of the mucosa. The anterior end of the larva may reach the fundus of the gland. There is no extravasated blood and little or no tissue reaction. R.T.L.

(183p) There is a greatly increased percentage of development of cysticercoids when eggs of *Hymenolepis nana* var. *fraterna* have been kept in an aqueous medium for 48 to 72 hours at room temperature before feeding to mice. R.T.L.

(183q) As recently shown for *Trichinella spiralis* there appear to be physiological differences in strains of *Hymenolepis nana* var. *fraterna* isolated from mice of different localities. Their eggs give different percentage developments into cysticercoids. R.T.L.

(183r) Maldonado finds that the eggs of *Tamerlanea bragai* are ingested by the snail *Subulina octona*, and develop into mother sporocysts which produce daughter sporocysts containing 8 to 10 tailless cercariae, and these encyst within the spherical daughter sporocysts—they are infective when eaten by the final host 2 months after the ingestion of eggs. The adult is mature, in the kidney of the domestic pigeon, in 2 weeks. A well developed acetabulum is present in the cercaria but is usually not persistent in the later stages, though vestiges have been seen in worms from the final host. N.G.S.

(183s) Kuntz describes a cysticercus of *Taenia taeniaeformis* in which 2 fully developed and distinct strobilocerci were attached to a single bladder. P.A.C.

184—Journal of the Royal Army Medical Corps.

- a. PRIOR, A. P., 1943.—“A case of cerebral cysticercosis.” 80 (5), 278–280.

(184a) Prior records a case of cerebral cysticerciasis in an East African native admitted to a British Military Hospital suffering from pneumonia. Shortly after admission the patient passed into status epilepticus and died within 24 hours. At post-mortem *Cysticercus cellulosae*, showing no evidence of disintegration or calcification, were found in the brain. There were no subcutaneous nodules. A.E.F.

185—Journal of the Royal Army Veterinary Corps.

- a. EDWARDS, W. T., 1943.—“Fascioliasis in a mule.” 15 (1), 12.

(185a) Edwards reports what he believes to be the first Indian record of *Fasciola hepatica* in the liver of a mule. Numerous specimens were found in a transport animal in northern India. A.E.F.

186—Journal of the Tennessee Academy of Science.

- a. GUTHRIE, J. E. & HARWOOD, P. D., 1943.—“Some practical results of using phenothiazine in the treatment of yearling wethers.” 18 (4), 355–358.

(186a) Guthrie & Harwood show again the value of phenothiazine as an anthelmintic for ewes. Those which had had anthelmintic treatment were significantly heavier and sold for a better price than the controls. P.A.C.

187—Journal of Thoracic Surgery.

- a. CEBALLOS, A., 1943.—“Operation performed in one stage with inhalation anesthesia for hydatid cysts of the lung, free of adhesions.” 12 (6), 553–565.

188—Journal of Wildlife Management.

- a. HERMAN, C. A. & JANKIEWICZ, H. A., 1943.—“Parasites of cottontail rabbits on the San Joaquin Experimental Range, California.” 7 (4), 395–400.

(188a) Cottontail rabbits, *Sylvilagus audubonii vallicola*, were examined for parasites in California. There were 4 nematodes; *Obeliscoides cuniculi*, *Nematodirus leporis*, *Passalurus ambiguus* and *Dermatoxys veligera*, and an undiagnosed larva from the blood. There were 3 cestode species; *Taenia pisiformis* in the cysticercus stage, *Cittotaenia variabilis* and *Railletina* (*Paroniella*) *retractilis*, the latter species having probably only been recorded once before in this host. P.A.C.

189—Lahey Clinic Bulletin.

- *a. PEACHER, W. G. & POPPEN, J. L., 1943.—“Echinococcosis; report of cerebral case.” 3, 111-117.

190—Laval Médical.

- *a. MARCOUX, H., 1943.—“Les parasitoses intestinales.” 8, 287-299.

191—M.S.C. Veterinarian. Michigan State College.

- a. HAWKINS, P. A., 1943.—“Sheep parasites.” 3 (4), 140-142, 152.

192—Medical Parasitology and Parasitic Diseases.

- a. PODYAPOLSKAYA, V. P., 1943.—[Perianal scrapings in the diagnosis of helminthiasis.] 12 (1), 83-85. [In Russian.]

(192a) Podyapolskaya shows that scrapings of the peri-anal folds are more reliable than faecal examination for the diagnosis of *Enterobius vermicularis* and *Taenia saginata* infections. For *Trichuris trichiura* and *Ascaris lumbricoides* infections faecal examinations give the better results, while in the case of *Hymenolepis nana* peri-anal scrapings are of no value at all. A.E.F.

193—Medicina. Buenos Aires.

- *a. GRAÑA, A., RECARTE, R. & BALEA, E., 1943.—“La histaminemia en la alergia hidatídica.” 3, 198-201.

194—Medicina. Revista Mexicana.

- a. NETTEL F., R., 1943.—“Onchocercosis. Vías de invasión del ojo.” 23 (443), 368-373.

195—Medicina Colonial. Madrid.

- *a. APARICIO GARRIDO, J., 1943.—“El estudio de la médula ósea por punción esternal en la práctica hematológica y parasitológica.” 1, 184-192.

196—Medicina Española.

- a. ROMERO CALATAYUD, A. & GÓMEZ-FERRER y YAGÜE, R., 1943.—“Contribución al estudio de la tenia *Hymenolepis nana*.” 9 (50), 275-279.
b. ROMERO CALATAYUD, A., 1943.—“Los vermes intestinales. I. Patología general. II. Sus relaciones con la infección tuberculosa.” 9 (53), 675-681.
c. ROMERO CALATAYUD, A., 1943.—“Los vermes intestinales. III. Grupos sindrómicos. IV. Síndrome convulsivo. Tenias. V. Síndrome diarreico. *Trichocephalus*.” 9 (54), 64-68.

(196a) Romero Calatayud & Gómez-Ferrer point out that nervous symptoms may be induced in the presence of heavy infestations of *Hymenolepis nana*, and recommend that an examination for helminths should be made in cases of unexplained nervous symptoms. They describe the case of a 6-year-old boy suffering from convulsions which disappeared after helminthic treatment. P.A.C.

(196b) After considering some of the pathological effects of intestinal helminths in man, Romero Calatayud turns to the relationship of helminthiasis and tuberculosis. A recent survey among children showed that 47.6% of tuberculous children harboured intestinal parasites, while only 20% of the healthy children did. He quotes the observations of several other workers in this field. P.A.C.

(196c) Romero Calatayud points out that infection with *Trichuris* should be suspected in cases of unexplained persistent diarrhoea and of high eosinophilia. P.A.C.

197—Medizinische Klinik.

- *a. SCHUBERT, R., 1943.—“Askariden-Cholangitis und Pankreatitis.” 39, 34-37.

198—Military Surgeon.

- a. WALLACE, W. C. & CHAMBERLIN, D. T., 1943.—“Hookworm infestation: comparative methods of treatment.” 93 (5), 427-432.

199—Mississippi Farm Research.

- *a. COWSERT, W. C. & BERLINER, V. R., 1943.—“Phenothiazine: new treatment for cattle hookworms.” 6 (2), 8.

(199a) Phenothiazine in a dosage of 20 g. for each 100 lb. of weight was found to be effective against cattle hookworms. [From an abstract in Exp. Sta. Rec., 89, 116.] R.T.L.

200—Naturaliste Canadien.

- a. MORGAN, B. B., 1943.—“The *Physaloptera* (Nematoda) of reptiles.” 70 (7/8), 179-185.

(200a) Only 3 species of *Physaloptera* are found in North American reptiles: (i) *P. abjecta* from *Liopeltis vernalis* in Wisconsin (a new host record) and a number of other snakes in the American continent. (ii) *P. obtusissima* from many snakes (including *Coluber obsoletus*, a new host record) and also from a brown lizard: this species also occurs widely in the Old World. (iii) *P. retusa*, also widespread in the Old World, occurs in many lizard species in both North and South America and has been reported from an alligator. P.A.C.

201—New Zealand Medical Journal.

- a. McNAMARA, K. N., 1943.—“Ruptured liver abscess and round worms. With a note on the use of spinal anaesthesia in infants.” 42 (230), 171-173.

202—North American Veterinarian.

- a. ANON, 1943.—“Internal parasites of the horse and mule.” 24 (12), 721-723.
b. ROSOFF, I. S., 1943.—“Control of equine strongylosis. Part IV. A survey: infection in mares and foals under field conditions.” 24 (12), 737-740.

(202b) A two-year study on a drove of purebred Belgian and Percheron horses owned by Cornell University forms the basis of the following recommendations for the reduction of strongyle infection under pasture conditions: (i) treatment of brood mares with phenothiazine before their pasture season; (ii) pasture brood mares separately in large, well drained pastures; (iii) practice rotational grazing of improved pastures, preferably shifting mares every ten days; (iv) spread the pasture droppings at least once before frost by dragging chains across the field, also closely clip the high grass in areas where faeces accumulate; and (v) provide adequate nourishment for the horses. Phenothiazine was given as a powder on grain at the dose rate of 40 g. In 10 horses the efficiency was 100%, in 6 horses it was 75%, four weeks after treatment. R.T.L.

203—Notulae Naturae.

- a. CABLE, R. M. & McLEAN, R. A., 1943.—“The occurrence of *Cercaria clausii* Monticelli, a marine Rattenkönig larval trematode, on the west coast of Florida.” No. 129, 7 pp.

(203a) [For abstract of this paper see Helm. Abs., Vol. XI, No. 219h.]

204—Ohio Journal of Science.

- a. HARE, R. C., 1943.—“An ecological study of the worm parasites of Portage Lakes fishes.” 43 (5), 201-208.

(204a) Of 127 fishes, representing 21 species, from Portage Lakes, Ohio, 76 (59.8%) harboured helminths. There was no new species. Trematodes, cestodes, nematodes and acanthocephalans were all represented: the most common species were the acanthocephalans *Leptorhynchoides thecatus* and *Neoechinorhynchus cylindricus*, and the trematodes *Neascus vancleavei* and *N. ambloplitis*. A.E.F.

205—Phytopathology.

- †a. ELLIS, D. E., 1943.—“Soil treatments with sodium nitrite for controlling damping-off and root knot.” 33 (12), 1110-1111.
- †b. FELDMAN, A. W. & SHAW, L., 1943.—“Sodium nitrite for root-knot control.” 33 (12), 1111.
- †c. STARK, jr., F. L., NEWHALL, A. G. & LEAR, B., 1943.—“Comparison of soil fumigants for the control of root-knot nematode.” 33 (12), 1118-1119.
- d. TAYLOR, A. L., 1943.—“Soil fumigation with chloropicrin for control of the root knot nematode, *Heterodera marioni*.” 33 (12), 1166-1175.

(205a) The application of sodium nitrite at the rate of 8 oz. per sq. yard under field conditions to soil naturally infested with *Heterodera marioni* 7 weeks prior to planting reduced root-knot infection of bean, okra, squash and tomato as effectively as chloropicrin or urea.

R.T.L.

(205b) Under greenhouse conditions sodium nitrite in concentrations of 6 oz. per sq. yard gave 93% control of *Heterodera marioni* in tomatoes and 12 oz. per sq. yard gave 100% control. For the standardization of these applications to various types of soil the base exchange capacity and replaceable hydrogen method was used and sodium nitrite was added in equivalents of 50, 100, 150 and 200% of the replaceable hydrogen. Temperature and moisture were important factors. Good growth followed the application of the chemical as early as one week before planting.

R.T.L.

(205c) Several nematocides were compared by injecting the fumigants 4 in. deep and 10 in. apart in replicate plots in a commercial greenhouse. Highly significant control of *Heterodera marioni* with an economic net return from a crop of tomatoes was obtained with (i) a methyl bromide-ethylene dichloride-carbon tetrachloride mixture, (ii) ethylene dichloride, (iii) chloropicrin-ethylene dichloride mixture, (iv) chloropicrin, and (v) methyl bromide-chloropicrin mixture; the treatments are here listed in ascending order of cost.

R.T.L.

(205d) Chloropicrin tested in the field against *Heterodera marioni* gave satisfactory control when applied at the rate of 200 lb. per acre in sandy loam soil from which undecayed roots were absent. The chemical was inserted in holes 6 in. deep spaced at 14 to 16 inches apart. The soil was sprinkled immediately with water to wet the top inch or two, or covered with mulch or glue-coated kraft paper. The cost per acre was estimated at 160 dollars for chloropicrin alone. In greenhouse and seedbeds it can replace steam sterilization but is economically practical only with crops of high value.

R.T.L.

206—Plant Disease Reporter.

- a. DAVY, R. H., 1943.—“An unusual occurrence of rootknot in central Iowa.” 27 (3/4), 112.

(206a) The roots of lettuce, beets and carrots were found to be severely damaged by the root-knot nematode, *Heterodera marioni*, in a garden in central Iowa. Chinese cabbage, potatoes and tomatoes growing in the infested area were not seriously affected. Nematodes are rarely found as a garden pest in this latitude and it is suggested that this occurrence was influenced by the mildness of the preceding winter.

M.T.F.

207—Prensa Médica. La Paz.

- *a. MACHICAO MURILLO, N., 1943.—“Cinco casos de quiste hidatídico del hígado encontrados en autopsia.” 2, 278-279.

208—Prensa Médica Argentina.

- a. CARRI, E. L., 1943.—“Parasitosis intestinal múltiple.” 30 (3), 130-139.

209—Press Bulletin. Florida Agricultural Experiment Station.

- a. WATSON, J. R., 1943.—“Mulch-against root-knot.” No. 586, 3 pp.

† Abstract of paper accepted for presentation at the 35th Annual Meeting of the American Phytopathological Society, Columbus, Ohio, December 4 to 6, 1943.

(209a) Watson states that mulching vegetable crops will satisfactorily keep down root-knot injury in Florida gardens. Nematode-destroying fungi develop in the decaying vegetable material of the mulch and check the increase in eelworm population. Dressings of quickly available nitrogenous fertilizers may be necessary in addition to the mulch. This method of combating root-knot injury is particularly suitable in the case of perennials such as figs, roses and peaches. M.T.F.

210—Proceedings of the American Society for Horticultural Science.

- a. WEINBERGER, J. H., MARTH, P. C. & SCOTT, D. H., 1943.—“Inheritance study of root knot nematode resistance in certain peach varieties.” 42, 321-325.

(210a) Weinberger, Marth & Scott have tested peach seedlings of many varieties for resistance to the root-knot nematode *Heterodera marioni*. Since great variation was observed in the degree of attack on plants in some varieties, they are merely classed as resistant or susceptible. Most seedlings tested were susceptible, including all the commercial varieties tried and most Tennessee Natural seedlings. Ten varieties are listed as resistant, namely, Bokhara; P.I. 55775, P.I. 55776, P.I. 55885, P.I. 55886 and P.I. 55888 (all belonging to the Yunnan group); P.I. 61302 (a cross of Bolivian Cling and Quetta nectarine); P.I. 63850, P.I. 63852 (both belonging to the Shalil group) and P.I. 107838 (Mao Tao group). Seedlings showing no galls in the first year sometimes showed moderate infestation 2 or 3 years later. Inheritance studies indicate that the character producing resistance to nematodes is dominant in both the Yunnan and Shalil groups, and both groups are homozygous for this character. M.T.F.

211—Public Health Reports. Washington.

- a. WRIGHT, W. H., KERR, K. B. & JACOBS, L., 1943.—“Studies on trichinosis. XV. Summary of the findings of *Trichinella spiralis* in a random sampling and other samplings of the population of the United States.” 58 (35), 1293-1313.

(211a) Wright, Kerr & Jacobs report *Trichinella spiralis* in 16.1% (or 855) of 5,313 human diaphragms examined (from 189 hospitals in 114 cities in 37 States and the District of Columbia) in the National Institute of Health. If the Jewish series of 200 with one positive is omitted, the incidence is 16.7%. Of the 5,313 diaphragms examined, 4,877 were from persons resident in urban communities and 436 came from rural areas. No statistically significant incidence was found in these, nor in any of the various series. The results of both microscopic and digestion-Baerman methods showed that alone the microscopic method would have missed 29.5% and the digestion-Baerman 37.4% of the positive cases, the first technique giving a higher percentage of dead than live larvae and the second *vice versa*. The numbers of cases with larvae in live, mixed, and dead states were 245, 142, and 468 respectively. Of the 855 positive cases 85.7% had infections of less than 11 larvae per gram, whilst 4.5% had infections of more than 50 larvae per gram (these being considered capable of causing pronounced clinical symptoms). Individuals of 55 years and over harboured 68.3% of the infections of over 10 larvae per gram. This figure being statistically significant the authors suggest three possible explanations of this increase in degree of infection with advancing years: (i) difference in exposure to the infection earlier in the life of individuals in the older age groups, (ii) only those who have survived heavy trichina infections are represented, and (iii) repeated infections occur in man and these heavy infections are due to superimposed infections. M.R.Y.

212—Publications. Tobacco Research Board, Southern Rhodesia.

- a. JACK, R. W., 1943.—“Root knot nematode research. Report for year ending 30th June, 1943.” No. 7 [Annual Report (1943) of the Trelawney Tobacco Research Station], pp. 27-39.

(212a) Results of experiments in which compost at rates of up to 16 tons per acre were hoed into ground infected with *Heterodera marioni* showed no reduction in root-knot in a subsequent tobacco crop. Silver proteinate was also found to be ineffective when applied to the soil. A study was made of the susceptibility of the local flora to root-knot and a list is given of 108 native and weed hosts (many of them new records) classified as to their susceptibility. Twenty crop plants were tested in pot cultures: 6 were heavily infested, namely, sunflower, soya bean

(Hernon), dolichos bean (*Dolichos Lablab*), *Tephrosia Vogelii* and Kaffir bean or cowpea. In addition, Kaffir melon (*Citrullus vulgaris*) and "Summer oats" were found infested in the field. Eight crop plants were very lightly infested, maize ("Hickory King" type), munga (*Pennisetum glaucum*), Proso millet (*Panicum miliaceum*), Giant Rhodes grass, Kaviroinda sorghum, Kaffir corn, Sunnhemp and velvet bean (Somerset). Six crops showed no infestation: Rhodes grass, Teff, ground nuts (Virginia Bunch), velvet beans (Marillee), a cotton (test incomplete) and dahl from Nyasaland. It is thought that the latter may prove valuable in reclaiming very heavily infested tobacco land. Other observations were made on the life-history of the nematode, and investigations are in progress on the effect of the drying out of infested soil.

M.T.F.

213—Puerto Rico Journal of Public Health and Tropical Medicine.

- *a. OLIVER-GONZÁLEZ, J., 1943.—"La acción in vitro del suero inmune sobre las larvas y los parásitos adultos de *Trichinella spiralis*." 18, 364-379.

214—Queensland Agricultural Journal.

- a. IRVING M., 1943.—"Treat sheep for stomach worm now!" 57 (4), 248-249.
b. NEWTON, L. G., 1943.—"Disease wastage in poultry flocks." 57 (5), 312-316.

215—Records of the South Australian Museum.

- a. JOHNSTON, T. H. & MAWSON, P. M., 1943.—"Endoparasites from the subantarctic islands of New Zealand." 7 (3), 237-243.

(215a) Johnston & Mawson have examined Sir W. B. Benham's collection of helminths obtained on an expedition in 1907, and have reported *Pseudobenedenia nototheniae* on the surface of the fish, *Notothenia colbecki* and *N. macrocephala* from Antipodes Island; *Porrocaecum decipiens* from the hair seal, *Arctocephalus hookeri*, from Campbell Island and its larval stages in the fish *Rhombosolea tapirina* from Campbell Island, *Notothenia microlepidota* from the Aucklands and *N. colbecki* as well as *N. macrocephala* from Antipodes Island; *Contracaecum spiculigerum* from *Phalacrocorax spiculigerum* from Auckland Islands; and *Anisakis simplex* larva from the fish *Thyrstites atun* at Port Chalmers. In order to compile a list of records from these islands the authors have studied Chatin's (1885) unfigured descriptions of species and have brought the nomenclature up to date, these becoming *Ascarophis campbelli* from *Notothenia filholi*; *Agamonema campbelli* (= larva of *Porrocaecum decipiens*) and *Ascaris filholi* (= larva of *Anisakis simplex*) both from fishes. A host-parasite list with locality, recorders and dates concludes the paper.

M.R.Y.

216—Report. Cornell University Agricultural Experiment Station.

- a. WILLMAN, J. P. & BAKER, D. W., 1943.—"A comparison of the tetrachlorethylene and the combined copper-sulfate-nicotine-sulfate solution as treatments for the control of worm parasites of the digestive tract of sheep and lambs." 55th (1942), 106-107.

(216a) Willman & Baker have compared the anthelmintic efficiency of a copper-sulphate and nicotine-sulphate mixture, used alone, with the efficiency of this mixture used alternately with a tetrachlorethylene and mineral oil mixture. Lambs were drenched over a period of several weeks and examined by faecal counts and later at post-mortem. On the whole, alternate treatments seemed to be more effective against Cooperia and less effective against Oesophagostomum than did the sulphate treatment alone. There was little difference in the effects of the two treatments on other helminths. The sulphate treatment alone is easier to administer and is cheaper than the combined treatment.

P.A.C.

217—Report of the Entomological Society of Ontario.

- a. BAKER, A. D. & THOMPSON, R. W., 1943.—"Some problems occasioned by the presence of the sugar-beet nematode, *Heterodera schachtii* Schm., in south-western Ontario." 73rd (for 1942), 44-47.
b. BAKER, A. D., 1943.—"A discussion of the pattern of distribution of the sugar-beet nematode, *Heterodera schachtii* Schm., in the Blackwell District of Lambton County, Ontario." 73rd (for 1942), 47-51.

(217a) Sugar-beet eelworm has been found in 18 fields, within an area of 5 square miles, in the Blackwell district of Ontario. Injury to the sugar-beet crop has not been severe. A "pre-cautionary area" of 14 square miles including the infected fields has been defined, and regulations made with the object of reducing injury to the crop and restricting the spread of the parasite in this area. In no case may sugar-beet be grown after sugar-beet, and where eelworm is present a suitable rotation must be followed. The production of beet seed and stecklings in the area is prohibited. Sugar-beets may only leave the area in specially labelled railway wagons which are washed down on being emptied at the factory. The water used for washing is discharged into a settling basin: this dries up in summer and becomes hot during the decomposition of organic matter, and no infection has been found in it. Cabbages and cauliflowers may be grown, but the movement of small plants and of top soil out of the area is discouraged. The attention of growers is drawn to the dangers of the spread of infection on implements, etc.

M.T.F.

(217b) The origin of the infection of sugar-beet eelworm in the Blackwell district is not clear. The distribution of the infection in the area appears to have been influenced by the fact that a lake formerly existed and the drainage ditches tend to flood in the spring: all the infected fields lie in the region where floods tend to occur. *Heterodera marioni* is more prevalent than *H. schachtii* and is most concentrated in the same low-lying areas.

M.T.F.

218—Revista de la Asociación Médica Argentina.

*a. SERRES, J. R., 1943.—"Profilaxis de la hidatidosis equinocócica; 'acción de la Comisión central de profilaxis de la hidatidosis'." 56, 20-24.

*b. RIVAS, C. I. & MOREL, C., 1943.—"Hidatidosis extraósea e exteriorización endotorácica." 57, 239-242.

219—Revista Brasileira de Biologia.

a. TRAVASSOS, L., 1943.—"Tricostrogilídeos de mamíferos." 3 (3), 345-349.

(219a) Travassos records the presence of a number of trichostrongyle worms, including two new species, in mammals of Mato Grosso. *Longistriata perfida* n.sp. is distinguished by the shape of the spicules and occurs in the small intestine of *Sylvilagus minensis*. *Heligmodendrium crucifer* n.sp., from the small intestine of *Cercomys cunicularius cunicularius*, shows a curious disposition of one of the branches of the dorsal ray which crosses the externo-dorsal and finally lies parallel to it. *Molineus major* and *M. barbaris* were both recovered from the small intestine of *Tayra barbara*.

P.A.C.

220—Revista Clínica Española.

a. PIULACHS, P. & PLANAS-GUASCH, J., 1943.—"Aspectos radiológicos de la ascariidiosis intestinal." 10 (4), 254-260.

221—Revista Cubana de Cardiología.

*a. RÍO LEÓN, R., 1943.—"Contribución al estudio de las manifestaciones cardiovasculares de la anquilostomiasis." 4, 25-36.

222—Revista de la Facultad de Agronomía y Veterinaria. Buenos Aires.

a. ROVEDA, R. J., 1943.—"Helmintos de nuestras *Gallus gallus* Linné." 10, 290-293.

(222a) Roveda records the presence of 6 nematodes and 4 cestodes in fowls in Argentina. Nearly 90% of the birds are infested, many with more than one species.

P.A.C.

223—Revista del Instituto de Salubridad y Enfermedades Tropicales. Mexico.

a. MAZZOTTI, L., QUINTANAR, E. & PRIDA, M., 1943.—"Investigación de *Enterobius vermicularis* en 500 niños menores de 3 años y en 500 ancianos de la ciudad de Mexico." 4 (3), 273-277. [English Summary p. 276.]

(223a) Mazzotti et al. found 12, or 2.4%, of 500 children in Mexico City under 3 years old, and 25, or 5%, of 500 adults over 60 years old, to be infected with *Enterobius*. These

results were obtained from a single examination using the Graham technique [see Helm. Abs., Vol. X, No. 3a].

A.E.F.

224—Revista Médica de Corrientes.

- *a. ROSENBAUM, J. & CANEVARO, J. A., 1943.—“Un caso interesante de oclusión intestinal aguda.” 1, 116-118.

225—Revista de Medicina Tropical y Parasitología, Bacteriología, Clínica y Laboratorio.

- a. NOGUEIRA RIVERO, P., 1943.—“Parasitismo a vermes en Marianao.” 9 (2), 18-22.
- b. BASNUEVO, J. G., 1943.—“Investigación de larvas de *Trichinella spiralis*, por digestión artificial.” 9 (2), 26-27.
- c. KOURÍ, P., 1943.—“Investigaciones parasitarias en la ‘Jutía Conga’ (*Capromys pilorides*, Say). Nota previa.” 9 (3), 29-32.
- d. NOGUEIRA, P., 1943.—“Contribución al conocimiento del parasitismo por *Taenia saginata* con especial referencia a su tratamiento.” 9 (3), 32-35.
- e. KOURÍ, P., 1943.—“Sobre el tratamiento del parasitismo intestinal por *Taenia saginata* (lombriz solitaria).” 9 (3), 35-38.
- f. ANON, 1943.—“La terapéutica antihelmíntica moderna.” 9 (3), 38-42.
- g. ANON, 1943.—“El tratamiento clásico de las helmintiasis humanas.” 9 (3), 42-45.
- h. ANON, 1943.—“Tratamiento de la clonorchiasis, distomatosis hepática por *Clonorchis sinensis* en Cuba.” 9 (3), 47.
- i. KOURÍ, P., BASNUEVO, J. G. & SOTOLONO, F., 1943.—“Lecciones de parasitología y medicina tropical. Capítulo VI. Orden Trichurata.” 9 (4/5), 50-59.
- j. KOURÍ, P., BASNUEVO, J. G. & SOTOLONO, F., 1943.—“Exploración parasitológica de las vías digestivas y hepato-biliares. La biología parasitaria y su aplicación al diagnóstico del parasitismo.” 9 (4/5), 59-68.

(225a) During 5 years Nogueira Rivero has made more than 30,000 faecal examinations for helminths in the State of Marianao. Of these, 63.21% were positive for helminths. Trichuris, alone and together with other helminths, was very frequent: it was often found with ascarids and hookworms. The least common parasites were *Fasciola hepatica* and *Inermicapsifer*. The data are also arranged with regard to sex and age incidence throughout the 5 years. Remarks on treatments and their efficiency are also made. P.A.C.

(225b) Basnuevo describes his technique for examining diaphragm muscle for *Trichinella*. After digesting, the sediment is best tinted with methylene blue and examined in a petri dish, when the larvae stand out against the blue background as colourless bodies and can easily be picked out under a binocular microscope. P.A.C.

(225c) Kourí has examined 19 specimens of *Capromys pilorides*, in Cuba, in an attempt to find a rodent host of *Inermicapsifer cubensis*, a parasite of man: no specimen of this cestode was found. The coenurus stage of *Multiceps serialis* was found once and a species of *Trichuris*. This could not be identified definitely as no males were found though there were over 600 females, 314 of them being in one host. Attempts to cultivate the eggs were unsuccessful. P.A.C.

(225d) Nogueira has treated 110 infestations of *Taenia saginata* and obtained a definite cure in 73.64% with a single treatment. Most were treated with a mixture of carbon tetrachloride and male fern. Treatment was given after 24 hours on a fluid diet, and a purge, generally saline, was administered before and after the vermifuge. Most of the patients were available for examination for 6 months after treatment during which period search for segments was made. P.A.C.

(225e) Kourí analyses still further the results obtained by Nogueira in the previous article, taking into account the probable records of 14 patients who could not be observed for 6 months after treatment. He concludes that the standard of efficiency of this treatment can reasonably be said to be 86.95%. P.A.C.

(225h) Oral administration of gentian violet, in the form of “Anguilucida” Kuba tablets, is recommended against *Clonorchis sinensis*. The dosage is 4 tablets per day, taken with meals, for a period of one month. Intravenous injection of “Genciana” Kuba [an 0.5% solution of gentian violet] has also given results [dosage not given]. A.E.F.

(225i) Kouri et al. draw together in semi-popular form our present knowledge of *Trichuris trichiura*, considering structure, development, ecology and the purely medical aspects. There is no new information. [The authors define the *Trichurata* as worms with a cellular oesophagus. Chitwood & Chitwood [see Helm. Abs., Vol. VII, No. 156] show that the oesophagus is a muscular structure in close association however with large glandular elements.]

P.A.C.

(225j) Kouri et al. describe two cases of ascariasis in which no eggs were found in the faeces though adults were expelled during anthelmintic treatment for Necator and whipworm. They consider the usefulness of extracting fluid by duodenal tube, in the diagnosis of biliary helminths. Eggs of *Fasciola* and of *Clonorchis* are often found abundantly in bile when they are absent or rare in the faeces. The method is also successful in the diagnosis of *Strongyloides stercoralis*.

P.A.C.

226—Revista de Medicina Veterinaria. Buenos Aires.

- a. QUEVEDO, J. M., CANO, A. E. & GARCIA MATA, E., 1943.—“Experiencias con fenotiazina (bovinos y ovinos).” 24 (3/4), 151-166.

(226a) Quevedo et al. describe in some detail their method of administering phenothiazine to cattle and sheep which had become heavily infected with intestinal nematodes after being driven to fresh pastures. A wetting agent is essential to easy oral administration. Very good results were obtained from treatment.

P.A.C.

227—Revista de Neuro-Psiquiatria.

- a. BERNALES, S. E. & ENCINAS, E., 1943.—“Cisticercosis cerebral con sintomatología de tumor con localización a predominio ponto-cerebelosa.” 6 (1), 1-57.

228—Revista de la Policlínica Caracas.

- a. BRICEÑO MAAZ, T., 1943.—“Técnica de centrifugo-flotación.” 12 (68), 23-26.
 b. PÉREZ CARREÑO, M., 1943.—“La esplenectomía en la forma hepatoesplénica de la Bilharziosis mansoni.” 12 (69), 71-87.
 c. POTENZA, L., 1943.—“Bilharziosis pulmonar.” 12 (69), 119-125.
 d. CORRAL, P. DEL & VOGELSANG, E. G., 1943.—“*Taeniarhynchus saginatus* (Goeze, 1782) en Venezuela.” 12 (69), 126-128.

(228d) Corral & Vogelsang report 24 cases of *Taenia saginata* infection and 2 of *T. solium* from Maracay and district during the years 1933 to 1935. More females than males were infected. Of 200 cattle examined, 2 showed very light infections with *Cysticercus bovis*: a further batch of 5,000 cattle were examined at the Maracay slaughterhouse, and 2 had calcified cysts which were probably cysticerci.

A.E.F.

229—Revista de Sanidad y Asistencia Social.

- a. RUIZ RODRIGUEZ, J. M., 1943.—“La schistosomiasis mansoni in Venezuela.” 8 (2), 169-390.

230—Revista de la Sanidad Militar. Buenos Aires.

- *a. FERRARIS, L. V. & URRUTIA, J. M., 1943.—“Distomiasis del hepatocolédoco; contribución a su estudio.” 42, 37-46, 87-104.

231—Revue des Sciences Médicales Pharmaceutiques et Vétérinaires de l'Afrique Française Libre.

- a. FIASSON, R., 1943.—“Notes sur les parasites animaux du Haut-Apure (Venezuela).” 2 (2), 125-151.

(231a) These notes on the parasites of animals in Apure (southwest Venezuela) are mainly concerned with arthropods. It is however stated that *Parascaris equorum* and *Oxyuris equi* are common in horses; that from one horse a microfilaria, most probably that of *Setaria equina*, was recovered; and that *Haemonchus contortus* was found in a calf.

A.E.F.

232—Rhodesia Agricultural Journal.

- a. ANON, 1943.—“Eelworm resistance.” 40 (4), 213.

(232a) Species of *Nicotiana* stated to be resistant to eelworm in U.S.A. were found to be tolerant but not resistant to experimental infection. R.T.L.

233—Schweizerische Medizinische Wochenschrift.

- a. SOMMER, E., 1943.—“Askariasis und eosinophiles Lungeninfiltrat.” 73 (38), 1132–1137.

234—Scottish Farmer.

- a. STEWART, W. L. & CROFTON, H. D., 1943.—“Bigger and better lambs. How these were obtained in the north of England.” 51 (2629), 607.

(234a) Lyle Stewart & Crofton recommend the use of phenothiazine and complete minerals for keeping down intestinal helminths in lambs. The lambs should be dosed monthly, beginning in June and continuing until September for the best results. P.A.C.

235—Semana Médica.

- a. BACIGALUPO, J., ZABALETA, D. E. & LAURITO, J. O., 1943.—“A propósito de un caso de parasitismo errático en el hombre por *Fasciola hepatica*.” Año 50, 1 (1), 5–9.

(235a) Bacigalupo et al. review the 15 cases of human infection with *Fasciola hepatica* already reported from Argentina. They add a further case, in which an immature specimen was found in a subcutaneous nodule in the region of a lower rib. A.E.F.

236—Sinensia. Contributions from the Metropolitan Museum of Natural History, Nanking.

- a. WU, H. W. & LIU, C. K., 1943.—“Helminthological notes III.” 14 (1/6), 99–105.

(236a) Three new species of nematodes are described from China: *Protostrongylus kwongi* n.sp., a common lungworm of sheep, differing from other known species by the great length of the spicules: and two species from *Egretta garzetta* from near Pehpei—*Synhimantus equispiculata* n.sp. from the stomach lumen, distinguished by the sub-equal spicules, in which it differs from the related *S. invaginata*; and *Eustrongylides sinicus* n.sp., in nodules outside the stomach, resembling *E. ignotus* though there are several distinctions including the much shorter mouth opening and the very long spicule in the new species. It is noted that *E. linstowi* Chitwood is a full synonym of *E. ignotus* Jägerskiöld. N.G.S.

237—South African Medical Journal.

- a. MEILLON, B. DE & LEECH, R. B., 1943.—“A sparganum from an East African native.” 17 (18), 289–290.
 b. CAWSTON, F. G., 1943.—“Uncertainties about the identity of adult schistosomes.” 17 (18), 291.
 c. BREBNER, I. W., 1943.—“A case of hydatid cyst of the lung.” 17 (20), 319–320.

(237a) Three or four small nodules were observed during an operation for inguinal hernia on a Muganda native at Mengo (Uganda). One nodule contained caseous material and a white worm 5 to 10 cm. long. In another there were a number of shorter pieces. The patient had spent all his life within 20 miles of Entebbe. The pieces of worm averaged $\frac{1}{2}$ to $2\frac{1}{2}$ cm. in length and about 1 mm. in breadth and were diagnosed as spargana of unknown species. Of the adult pseudophyllids, *Diphyllbothrium erinacei*, *D. theileri* and *D. pretoriense* are the only species which have been described from African hosts—the last two have only been found once. R.T.L.

(237b) Cawston draws attention to the official circulars in which *Limnaea natalensis* is depicted as the carrier of Bilharzia disease even to the exclusion of *Physopsis africana*. Owing to the difficulty in distinguishing closely allied Bilharzia worms through variation in the number of testes the author is of opinion that the shape of the ova is more dependable. R.T.L.

238—Sovetskaya Meditsina.

- a. LONGINOV, A. N., 1943.—[An experiment in the treatment of ascariasis with hexyl-resorcinol.] 7 (4), 27–28. [In Russian.]

239—*Spolia Zeylanica*.

- a. GADD, C. H. & LOOS, C. A., 1943.—“Observations on the life history of the nematode *Panagrolaimus rigidus*.” 23 (2), 65–69.

(239a) Gadd & Loos present observations on the life-history and breeding habits of the common free-living cephalob nematode, *Panagrolaimus rigidus*, which they have studied on agar cultures. The worms feed on bacteria. In the absence of males, female worms do not lay eggs but in the presence of males, and after copulation, eggs are laid within 24 hours. In the presence of males, egg-laying goes on continuously and reaches its maximum on the 6th day, after which the rate of laying gradually diminishes to the 11th day. When males are removed from a culture egg-laying ceases and the authors conclude that not only is the stimulus of copulation necessary for the initiation of egg-laying, but that repeated stimulation is necessary to enable the female to lay the maximum number of eggs. T.G.

240—Texas Farming and Citriculture.

- a. GODFREY, G. H., 1943.—“Striking reduction of nematode infestation.” 19 (12), 4.

(240a) Godfrey reports the successful control of root-knot nematode in an infected field in the Lower Rio Grande Valley by means of 3 summer ploughings, carried out in June in dry weather at a temperature of about 100° and at intervals of about 10 days. When the previous, heavily infected, bean crop had been harvested, the roots were ploughed up and left exposed to the sun. In a few days they were thoroughly dry and hard and a second ploughing was made, to bring up and expose the next 1½ inches of soil. After ten days a third operation exposed the next inch and a half of soil. An autumn tomato crop grown on the field showed little galling of the roots and was strikingly superior to a crop grown on an adjacent untreated area of the same field. M.T.F.

241—Transactions of the American Microscopical Society.

- a. HUSSEY, K. L., 1943.—“Further studies on the comparative embryological development of the excretory system in digenetic trematodes.” 62 (3), 271–279.
- b. BAKER, J. R., 1943.—“*Cercaria steelmani*, a new macrocercous form.” 62 (3), 280–285.
- c. HUGHES, R. C. & MOORE, G. A., 1943.—“*Sphyranura euryceae*, a new polystomatid monogenean fluke from *Eurycea tynerensis*.” 62 (3), 286–292.
- d. STRANDINE, E. J., 1943.—“Variations in *Microphallus*, a genus of trematodes, from fishes of Lake Lelanau, Michigan.” 62 (3), 293–300.
- e. CARTER, W. J., 1943.—“*Proteocephalus sandgroundi*, a new tetraphyllidean cestode from an East Indian monitor lizard.” 62 (3), 301–305.
- f. GOLDSMITH, J. B., 1943.—“A differential stain for the demonstration of *Trichinella* larvae in tissue.” 62 (3), 327–328.
- g. FRAYNE, N. Z., 1943.—“The morphology of two monogenetic trematodes, *Choricotyle cynoscioni* (MacCallum, 1917) and *Choricotyle reynoldsi* n.sp.” 62 (4), 382–389.
- h. WEBSTER, J. D., 1943.—“A revision of the Fimbriariinae (Cestoda, Hymenolepididae).” 62 (4), 390–397.
- i. RIGNEY, C. C., 1943.—“A new davaineid tapeworm, *Raillietina (Paroniella) centuri*, from the red-bellied woodpecker.” 62 (4), 398–403.

(241a) Hussey continues her studies on the development of the excretory system in Digenea [see Helm. Abs., Vol. X, No. 97a]. The 5 species studied here show the fundamental similarity in the development of the primary excretory system and bladder; that of the cercariaeum of *Zoogonum rubellus* follows the development of the stylet cercariae and others. In the gasterostome, *Bucephalus elegans*, the 2 primary flame cells can be seen in the germ ball and development follows the primitive type in the fusion of the primary tubes to form the bladder, though the definitive excretory pores are secondary in this group: certain differences are found in this account from that of Woodhead for *B. papillosus*. N.G.S.

(241b) Baker finds that the new cercaria, *Cercaria steelmani* n.sp., is similar to the gorgoderid forms so far described, and its closest ally is *C. raiacauda* Steelman which differs less from *C. steelmani* than it does from *C. sphaerocerca*. The present species is larger than *C. raiacauda*, its tail wings are thicker and more rounded, but it is lacking in the ornamentation found in the latter species. Both species are found in the same locality but are strictly confined

to their respective hosts: *C. raiacanda* in *Musculinum* sp., and *C. steelmani* in *Sphaerium aureum declive* (nearly 7% infected at Boomer Creek, near Stillwater, Oklahoma). N.G.S.

(241c) Hughes & Moore have described the fourth species of the polystomatid genus *Sphyranura*, *S. euryceae* n.sp., on the neotenic plethodontid salamander, *Eurycea tynerensis* Moore & Hughes, from a tributary of the Illinois River, Oklahoma. Young forms occurred on the external gills and at the base of the forelimbs, and older ones more generally distributed on the body surface. The size range is lower than that of the other species but it resembles *S. oligorchis* in having few testes and in some other respects, though the organs are smaller; there is an accessory claw on the outer side of the anchors just distal to their bifurcation, and there is a rudiment of only one, blind, vagina. N.G.S.

(241d) What have hitherto been regarded as two distinct species of the genus *Microphallus*, *M. ovatus* and *M. opacus*, have been studied by Strandine from *Micropterus dolomieu* and *Amia calva* from a lake in Michigan. Fifty specimens were compared from each host, and the extent of variations in specific criteria were found to be comparable in both groups, so that in view of this intergradation the form of *M. opacus* found in Lake Lelanau is regarded as a variety of the genotype *M. opacus* (Ward) [*M. opacus ovatus* (sic)]. The extent of variations and other data have been included in the emended diagnosis of the type species. N.G.S.

(241e) Carter describes *Proteocephalus sandgroundi* n.sp., a cestode parasite from *Varanus komodoensis*. The species can be distinguished by the shape of the genital atria and cirrus pouch, the position of the genital pores, the form of the ovary and the arrangement and chitinization of the eggs. P.A.C.

(241f) When muscle containing *Trichinella spiralis* is fixed overnight in Bouin's fluid and, after rinsing, is stained in bulk with Delafield's or Harris' haematoxylin, treated with acid alcohol until the haematoxylin has been removed from the tissue, the parasites are sharply coloured purple, while the muscle fibres remain coloured yellow by the picric acid. R.T.L.

(241g) Frayne gives a description of *Choricotyle reynoldsi* n.sp., from the gills of *Cynoscion nebulosus*, and compares it with the nearly related *C. cynoscioni* from *Cynoscion regalis*, which he redescribes. Both hosts were from Virginia. Both species differ from other members of the genus in having two pairs of hooks on a terminal lappet, and they are said to lack a genito-intestinal canal. A large lobate receptaculum seminis occurs in both species, posterior to the ovarian complex. The genital hooks and some other features are described in detail. *C. reynoldsi* has a shorter and broader body, and a relatively larger haptor than *C. cynoscioni*, and there are 9 genital hooks in the former but only 7 in the latter. N.G.S.

(241h) In considering the Fimbriariinae, Webster introduces the name *Fimbriariodes lintoni* nom. nov. for *Fimbriaria falciformis* Linton, 1927 and describes *Fimbriariodes haematopodis* n.sp. from the ileum of *Haematopus bachmani* in Alaska. *Fimbriaria fasciolaris* is recorded for the first time from *Anas rubripes* and *H. bachmani*. He considers that the subfamily contains 3 genera:—*Fimbriariella*, with complete segmentation and a sac-like uterus; *Fimbriariodes*, with internal segmentation; *Fimbriaria*, with segmentation somewhat obscure. P.A.C.

(241i) Rigney describes *Raillietina* (*Paroniella*) *centuri* n.sp. from the small intestine of *Centurus carolinus* in Oklahoma. One of the specimens showed irregularity in the arrangement of the genital apertures. He lists the characters in which this species differs from the 10 already described from piciform hosts. P.A.C.

242—Transactions of the Royal Society of South Australia.

- a. JOHNSTON, T. H. & ANGEL, L. M., 1943.—"The life history of the trematode, *Paryphostomum temicollis* (S. J. Johnston)." 66 (2), 119-123.
- b. JOHNSTON, T. H. & SIMPSON, E. R., 1943.—"Some nematodes from Australian frogs." 66 (2), 172-179.
- c. JOHNSTON, T. H., 1943.—"Trematodes from Australian birds. I. Cormorants and darters." 66 (2), 226-242.
- d. JOHNSTON, T. H. & BEST, E. W., 1943.—"Australian Acanthocephala. No. 3." 66 (2), 250-254.
- e. JOHNSTON, T. H. & MAWSON, P. M., 1943.—"Some ascarid nematodes from Australian marine fish." 67 (1), 20-35.

(242a) Johnston & Angel have reared the developmental stages of *Paryphostomum tenuicollis* in South Australia. The 27-spined echinostome cercaria was found in 5.2% of *Amerianna* spp. snails—being commonest in *A. pyramidata* and *A. pectorosa*, but also in *A. tenuistriata*; experimental infection was successful with the second species. Similar, though slightly smaller, cercariae occur in the same district in *Limnaea lessoni*. The cercaria and redia are described in detail, and confirmatory evidence is given that the relative size of the pharynx and gut alter during development of the redia of this group. Experimental encystment occurred under the skin of 5 species of aquarium fishes and one species of tadpole: cysts occur naturally in *Carassius auratus*, *Pseudaphritis urvillii* and *Tandanus tandanus* in the same swamp with the snails; and adults are recorded from *Phalacrocorax carbo*, *P. melanoleucus*, *P. fuscescens* and *P. sulcirostris* from this region. The cercaria is nearest to *Cercaria Euparyphii-melis* of Beaver, though there are differences between cercariae and rediae; it is thought that owing to the similarity in life-cycles these two genera may be close relatives: the anatomy of the adults is compared. N.G.S.

(242b) Johnston & Simpson describe the following new species of nematodes from Australian frogs: *Oswaldocruzia limnodynastes* n.sp., *Spiroonoura hylae* n.sp., *Cosmocerca limnodynastes* n.sp., *C. australiensis* n.sp., *C. propinqua* n.sp., and *Rhabdias hylae* n.sp. New hosts are also recorded for *Physaloptera confusa* larvae. A.E.F.

(242c) After surveying the literature on avian trematodes of Australia (in the course of which he records *Echinoparyphium recurvatum* from a turkey in Melbourne) Johnston describes the species reported for cormorants and darters. Arranged under hosts these are: PHALACROCORAX MELANOLEUCUS; *Dolichosaccus solecarius*, for which *Dolichosacculus* n.g. is erected: PHALACROCORAX VARIUS; *Stictodora diplacantha* n.sp.: PHALACROCORAX spp.; *Paryphostomum radiatum* (synonyms: *P. tenuicollis*, *P. testitri-fo- lium* and *P. phalacrocoracis*), *Petasiger exaeretis*, *Hysteromorpha triloba* (synonym: *Diplostomum granulosum*), and *Echinoparyphium phalacrocoracis*: PLOTUS (= ANHINGA) NOVAE-HOLLANDIAE; *Clinostomum australiense*. A.E.F.

(242d) Johnston & Best describe *Corynosoma cetaceum* n.sp. from the dolphins, *Delphinus delphis* and *Tursiops truncatus*. They also record *C. clavatum* from a cormorant, *Phalacrocorax varius*, and a seal, *Gypophoca dorifera*, and *C. australe* from a seal, *Neophoca cinerea*. A.E.F.

(242e) Johnston & Mawson discuss in detail the taxonomy of *Capsularia marina* (Linn.); they conclude that it is the larval stage of *Anisakis simplex* Johnston & Mawson, 1943. The genus *Capsularia* is re-established, with *Stomachus*, *Filocapsularia*, *Anisakis*, *Peritrachelius*, and *Conocephalus* as synonyms. *Capsulariinae* nom. nov. replaces *Anisakinae*, with *Acanthocheilinae* as a synonym. The very extensive synonymy of *C. marina* is listed. *C. marina* is recorded from 7 marine fishes: *Contracaecum legendrei*, *C. incurvum*, and *Acanthocheilus quadridentatus* are also recorded from marine fishes. A.E.F.

243—Transactions of the Royal Society of Tropical Medicine and Hygiene.

- a. SCOTT, H. H., 1943.—“The influence of the slave-trade in the spread of tropical disease.” 37 (3), 169–188.

(243a) In his Presidential Address to the Royal Society of Tropical Medicine and Hygiene Sir Harold Scott discusses the part played by the slave trade in the spread of tropical diseases. He deals only with traffic from West Africa to the New World. Among the infections considered to have been spread by this means those caused by the following helminths are included: *Wuchereria bancrofti*, *Acanthocheilonema perstans*, *Loa loa*, *Dracunculus medinensis*, and *Schistosoma mansoni*. A.E.F.

244—Trudi Gorkovskovo Gosudarstvennovo Selskokhozyaistvennovo Instituta.

- a. SOBOLEV, A. A., 1943.—“A revision of the family Acuariidae (Nematodes) with description of the new subfamily Echinuriinae n.subf. and new genus *Skrjabinoclava* n.gen.” 4, 285–302. [In Russian: English summary p. 302.]

(244a) Sobolev, reviewing the family Acuariidae Seurat, 1913, comes to the conclusion that in the subfamily Acuariinae Railliet, Henry & Sisov, 1912, the genera *Echinuria* Soloviev,

1912, *Seuratia* Skrjabin, 1916, and *Skrjabinocara* Kuraschwili (description of the last at present only in manuscript) possess among them common features sufficient to exclude them from this subfamily. He therefore creates for them a new subfamily, Echinuriinae, which is mainly characterized by the longitudinal rows of spines on the body. The author restricts himself in this paper mainly to the analysis of the new subfamily Echinuriinae and to the new genus *Skrjabinoclava*, in which he places species excluded from the genus *Echinuria*, viz., *Skrjabinoclava decorata* (Solonitzin, 1928), *S. horrida* (Rudolphi, 1809), *S. solonitzini* (nom. nov. for *Echinuria aculeata* of Solonitzin, 1928) and *S. cincli* (Yamaguti, 1935). He gives for the first three drawings and detailed redescrptions based partly on his own observations. In the paper are included keys for identification of subfamilies in the Acuariidae, the genera in the new subfamily Echinuriinae, and the species in the new genus *Skrjabinoclava*.

C.R.

245—United States Naval Medical Bulletin.

- a. DICKSON, J. G., HUNTINGTON, jr., R. W. & EICHOLD, S., 1943.—“Filariasis in defense force, Samoan group. Preliminary report.” 41 (5), 1240-1251.

(245a) As 13.6% of 251 natives of the island of Tutuila in the Samoan group have *Filaria* in their blood, an attempt was made to estimate the danger of communication of this infection to U.S. personnel as it was necessary to quarter troops in native villages. Evidence was obtained that acute lymphangitis, locally named mumu, was due to filarial infection. In one patient who had been only 5 months, and another who had been only 9 months in the area, adult *Filaria* worms were found. As “Samoan lymphangitis” was suggestive of a sensitization reaction to an antigen released in the lymph, tests were made with an antigen derived from *Dirofilaria immitis* with suggestive results. In acute cases a few days rest in bed is recommended and the importance of reassuring the patients is stressed.

R.T.L.

246—Veterinary Journal.

- a. ALDIS, D. H., 1943.—“*Ascarides* in the pig; interesting sequelae.” 99 (7), 197.
 b. BINGHAM, M. L., 1943.—“Parasitic aneurysms in a young foal.” 99 (9), 245-246.
 c. LEESE, A. S., 1943.—“Parasitic aneurism in foal.” [Correspondence.] 99 (10), 276.
 d. CAMPBELL, J. G. & SLOAN, J. E. N., 1943.—“A possible new species of trematode parasitic in the kidneys of the king penguin (*Aptenodytes longirostris*).” 99 (11), 291-294.

(246a) Aldis describes the case of a pig, carrying ascarids, in which the bowel became strangulated. The helminths invaded the liver, causing dilation and inflammation of the gall bladder, bile duct and intestine to the level of the occlusion. There was complete adhesion of the stomach and liver wherever they touched.

P.A.C.

(246d) Campbell & Sloan found that 6 king penguins which died in the Edinburgh Zoo had an infection of the ureters and their intrarenal branches, which were filled with muco-pus containing eggs of a trematode: the flukes were found in pairs in cystic cavities in the ducts of Bellini. Their description is postponed, though it is hinted that they are probably distinct from *Renicola lari*. Possible vectors for the metacercaria are discussed, and the herring used as food is suspect.

N.G.S.

247—Veterinary Medicine.

- a. THORP, W. T. S. & KEITH, T. B., 1943.—“Use of phenothiazine for sheep compared with other anthelmintics. Suggested method of administration.” 38 (6), 215-220.
 b. HOLLENBECK, J. B., 1943.—“Chloroform for lung worms.” 38 (6), 232.
 c. PRICE, E. W., 1943.—“The presence of the lancet fluke, *Dicrocoelium dendriticum* (Rudolphi, 1819) in cattle in the United States.” 38 (8), 294-296.
 d. ENZIE, F. D., 1943.—“The status of hydrogen peroxide as an anthelmintic in dogs.” 38 (8), 302-304.
 e. WEBB, L. M., 1943.—“Cutaneous habronemiasis.” 38 (8), 316.
 f. MORGAN, R., 1943.—“Parasite in the spermatheca.” 38 (9), 352.
 g. OLIVIER, L., ALLEN, R. W. & HARDCASTLE, A. B., 1943.—“Removal of the cecal worm, *Heterakis gallinae* from chickens by feeding phenothiazine in the mash.” 38 (10), 384-386.
 h. DURRELL, W. B., 1943.—“Worms in the genital organs of a colt.” 38 (12), 490.

(247a) Thorp & Keith have carried out experiments to determine the relative efficacy of tetrachlorethylene, nicotine sulphate, copper and nicotine sulphates, and phenothiazine against nematodes in sheep. All the treatments resulted in reduced nematode egg-counts, but only phenothiazine maintained the counts at a consistently low level. One group of animals was given phenothiazine in a salt lick (1 part of powdered phenothiazine to 9 parts of granulated salt): this method was successful, and it is recommended as simplifying administration of the drug. Good results were obtained with heavily parasitized animals by giving an initial drench with phenothiazine (12.5 g. for lambs, 25 g. for sheep) and then giving them the salt mixture. Phenothiazine had no apparent effect on cestodes. There was no evidence of toxicity. A.E.F.

(247b) Hollenbeck has for several years used chloroform in treating calves, sheep and pigs for lungworms, with great success. About half an ounce of chloroform is put on a piece of cotton, which is placed in the bottom of a large can. The can is then forced over the animal's nose and held tight for 15 seconds, or until several inhalations have been taken. A.E.F.

(247c) Price records 25 cases of *Dicrocoelium dendriticum* infection in cattle in U.S.A. With one exception all the animals came from the eastern Finger Lakes district of New York; the exception came from Pennsylvania, but it has not been possible to determine whether the animal was reared there or not. [See also Helm. Abs., Vol. XII, No. 69a.] A.E.F.

(247d) Enzie reports some success with hydrogen peroxide as an anthelmintic in dogs, but its use cannot be recommended. It seemed to be useless against cestodes and only partly successful against ascarids, hookworms and whipworms. It caused some haemorrhagic enteritis in the caecum and rectum and there was no great margin of safety in its use. P.A.C.

(247f) Morgan records the finding of a strongyle in the spermatic sheath of a yearling colt. A.E.F.

(247g) Olivier et al. have devised a method whereby *Heterakis gallinae* can be removed by phenothiazine fed in the mash. An intake of from 0.5 to 1.0 g. of the drug within 6½ to 7½ hours is necessary. Only about half the worms were removed when the average intake of drug per bird was 0.4 g. P.A.C.

(247h) Durrell briefly describes an infection in a colt where "the entire testicle and peritoneal coverings were filled with 'peritoneal worms'. The colt was in an extremely emaciated condition." A.E.F.

248—Veterinary Record.

- a. ROACH, R. W., 1943.—"Two cases of avitaminosis A encountered in poultry." 55 (27) 265-266.
- b. CHESNEY, R. W. L., 1943.—"The diseases of sheep on the Romney Marsh." 55 (50), 477-481.

(248a) Roach describes a fatal case of avitaminosis A in a chicken which also carried an excessively heavy burden of *Heterakis gallinae* and *Ascaridia galli*. P.A.C.

(248b) In a general consideration of disease among sheep grazed on the Romney Marshes, Chesney mentions that fluke may occur in wet summers on the uplands above the marshes. Intestinal helminths are sufficiently prevalent to recommend continued worming with a reliable drug. Husk is more prevalent than either fluke or bowel worms and may cause sickness in 10% and death in 3% of the lambs. P.A.C.

249—Veterinary Student. Iowa State College.

- a. ISAKSON, E. W., 1943.—"Some parasites of the dog. A study of the parasites less commonly encountered." 5 (4), 167-169, 204-206.

(249a) Isakson draws attention to a number of parasites of dogs which are not often referred to in text books, and mentions something of their appearance and effects. *Oslerus osleri*, a parasite of the trachea, has only a scattered distribution in North America. *Spiroptera lupi*

causes proliferation of the connective tissue of the oesophagus, stomach and aorta and a variety of symptoms may result from its presence, according to the position of the growth. *Diphyllobothrium latum* may occur in dogs but usually only in a dwarfed and abnormal condition. *Ancylostoma braziliense* may occur in both cats and dogs. An arachnid parasite, *Linguatula serrata*, is also mentioned.

P.A.C.

250—Virginia Medical Monthly.

- a. LITTLEJOHN, T. R., 1943.—“Hook worm disease.” 70 (9), 455-456.

251—Wisconsin Medical Journal.

- a. VOGEL, T. L., 1943.—“Trichinosis epidemic in Rock County.” 42 (9), 909-915.

(251a) Vogel reports on an outbreak of trichinelliasis in Rock County, Wisconsin, caused by eating infected sausage. Twenty-eight persons, representing 13 families, were affected: there were no fatal cases.

A.E.F.

252—Zentralblatt für Bakteriologie. Abteilung I. Originale.

- a. HOMPESCH, H., 1943.—“Ueber die Verbreitung von menschlichen Eingeweidewürmern in verschiedenen europäischen Ländern.” 150 (4), 208-215.

(252a) Very little attention has been paid to human infections with intestinal helminths in Europe. Hompesch reviews earlier literature on the subject, and gives the results of faecal examination, during 1940 to 1942, of 96,044 adult male workers imported into Germany from other European countries. Of these, 12,332 harboured helminths. The highest incidence was in Croats (39.67%) and Italians (28.66%): Dutch (8.27%) and Ukrainians (7.47%) came next, while workers from Poland, Belgium, France, Denmark and Czechoslovakia averaged about 5%. *Ascaris lumbricoides* and *Trichuris trichiura* were the most common species among all workers. *Taenia saginata* was found in 0.03% Russians, 0.08% Poles, 0.62% Croats, 0.35% Italians, 0.13% Belgians, and 0.05% French; *T. solium* was found only in one Belgian, 3 Croats and 3 Italians. 45 Italians (0.43%) harboured *Ancylostoma duodenale*; this species was absent from workers from all other countries. Isolated cases of *Strongyloides stercoralis* infection were found among Ukrainians, Poles, Italians and Belgians. In view of the method of examination, the figures given for *Enterobius vermicularis* are considered to be of little value.

A.E.F.

253—Zoologica. New York.

- a. NIGRELLI, R. F. & ATZ, J. W., 1943.—“Biometry of puffers and their parasites.” 28 (1), 1-8.

(253a) Nigrelli & Atz have studied the distribution of the more important parasites of puffers (including *Spheroides maculatus*) in relation to the age and sex of the host at different seasons; and they conclude that as the number of parasites increases markedly with age and size of the fish, only those less than 12 cm. long should be selected for exhibition tanks—mature fish range from 9 to 24 cm. long. Females are more prone to internal parasites than males. The two important gut trematodes are both host specific. *Lintonium vibex* shows its peak infection in July but remains after some time in captivity, and several recruitments to its population occur; *Bianium plicatum*, on the other hand, has only one recruitment, and it is thought that this confers some immunity on the host against subsequent infection—it tends to disappear in fish kept in captivity. No monogenetic trematodes were found, and the virtual absence of cestode cysts was remarkable.

N.G.S.

NON-PERIODICAL LITERATURE

- 254—BANHAM, 1943.—“Banham's veterinary posology. 7th edit., revised by W. J. Ironside.” London, vii + 206 pp.

This revision of Banham's Veterinary Posology contains a section listing the more important parasites of domestic animals. For the Platyhelminia the definitive and final hosts are given and when necessary the type of larva is indicated. For Nematoda and Acanthocephala, the definitive host is given with the vector when one is necessary or the nature of the infective stage when the life-history is direct. The pathogenicity is indicated for all parasites. P.A.C.

- 255—HUFF, C. G., 1943.—“A manual of medical parasitology.” Chicago, x + 88 pp.

- 256—WILSON, G. F., [1943].—“The chrysanthemum eelworm.” National Chrysanthemum Society, 6 pp.

Fox Wilson gives an account of chrysanthemum eelworm, *Aphelenchoides ritzema-bosi*, setting out the chief symptoms of attack, the biology of the parasite, susceptibility of varieties and methods of control. T.G.

- 257—NUTRITIONAL CONFERENCE (3rd) for Veterinarians, Decatur, Indiana, 7 July, 1943. Fort Wayne, Indiana, 66 pp.

- a. THORP, W. T. S., 1943.—“Sheep parasites.” pp. 31-35.